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ORIGINAL COMMUNICATIONS.

Notes of a Case of latent Phthisis pulmonalis terminating suddenly in Pneumothorax. By F. W. SARGENT, M. D., one of the Physicians to the Girard College.

Wm. McLaughlin, æt. 13, lost his parents and several brothers and sisters from consumption. He was rather under the ordinary size of boys of his age, possessed of but little muscular vigor, and was indisposed to indulge in the out-of-door sports of his companions. During the three years of his residence at the Girard College, he was not at any time sick, though he was always looked upon as "delicate." He had had a slight cough from time to time, after special exposure; but he had no chronic or habitual cough, as I am assured by the Governess who had charge of the division in which he was, and who, at night, occupied a room adjoining that in which he slept. And no one of his friends recollected his having been severely sick at any time previous to his admission to the College. His skin was thin and white; his face freckled; his hair of a bright red color; mental powers not much above mediocrity.

The first occasion of his being in the Infirmary for medical

treatment, was on Saturday, December 20th, 1851, when he complained simply of feeling a little unwell, without giving any definiteness to his complaints; this was in the evening, and he had in the morning voluntarily accompanied some visitors to the top of the college building, a feat which involves considerable fatigue to those who are feeble. He remarked that he thought he had taken cold from exposure on the roof of the College, where there is always a considerable breeze.

He slept soundly on Saturday night, and on Sunday morning said he felt quite well. He informed the nurse that he had not had an evacuation of his bowels on the previous day, and she accordingly gave him a dose of castor oil, which he immediately rejected from his stomach; and as he continued to feel sick, with a sensation of oppression at the epigastrium, a teaspoonful of Coxe's hive syrup was administered, which he threw up speedily, and with relief to these symptoms. The act of vomiting in both instances was easy and unattended with straining.

Toward evening, he became feverish, and I was sent for to see him. He complained of soreness and pain at the lower part of his chest, in front and on the left side, aggravated by coughing or any violent or prolonged action of the respiratory muscles, but not partaking of the characters of the pain of decided pleurisy. His cough was frequent, hard and dry; pulse frequent; skin hot and moist. His decubitus was easy, though he preferred lying on his back or on the right side. The percussion was resonant, and about equally so on both sides of his chest; the respiratory murmur was somewhat more feeble and less completely developed on the left than on the right, unmixed with râle of any kind, however. In the examination of his chest I was struck with his thinness; there seemed to be no fat about his chest or arms, and the muscles were small and soft.

In the absence of any positive indication of inflammation of the lungs, bronchial tubes, or pleuræ, and hoping that the case would prove to be a rheumatic attack affecting chiefly the parietes of the thorax, I directed that his chest should be well bathed with a warm liniment composed of laudanum, spirits of camphor, and olive oil, and subsequently covered with a warm poultice of hops—both to be repeated from time to time; and that he should take, every two or three hours, according to circumstances, 1 gr. of nitrate of potassa, with 2 grs. of Dover's powder.

He slept none during the night, but coughed very frequently and with violence, without expectoration; the soreness and pain in his chest continued but little abated by the applications which were made, and by the Dover's powder; although there was no great aggravation of these symptoms, nor any sudden accession. Early in the morning, however, he complained of increased soreness at the top of his left chest, and his cough became rather more violent in its paroxysms.

On my visit at 9 A. M., Monday morning, I found his breathing more frequent and more labored; his cough also increased; the pulse more frequent, and the skin hotter; the left side of the chest was tympanitic on percussion, and distended with air which elevated the intercostal depressions, and rendered this side of the thorax more full than the other; the heart was a little displaced towards the median line of the sternum, and the vesicular murmur was replaced by bronchial respiration, amphoric respiration, and, occasionally, "metallic tinkling." In short there was undoubted "*pneumothorax.*" And, in view of the boy's appearance and history, and the fate of his parents and other relatives, there could be little question that a *tubercular cavity* had opened into the pleural sac.

A blister was applied to the left side of the chest; the nitre and Dover's powder were continued, arrow-root boiled with milk and chicken-tea were directed to be given in small portions and as frequently as he might desire; (he had no appetite, and would take but little nourishment.)

In the evening his condition seemed to be about the same as in the morning. Conditional directions were given as to the administration of nourishment, and, in addition, of wine-whey.

During the night he slept at intervals, on one occasion as long as an hour and a half, being awakened by cough and dyspnœa. But at 6½ A. M., Tuesday, he suddenly experienced a sensation of increased oppression, and immediately said he thought he was dying. He died in the course of an hour from this time, his intellect clear to within a few minutes of his death.

Examination twenty-six hours after death.

Great emaciation of the muscles and integuments of the trunk, and limbs; posterior surface stained.

Both sides of chest resonant, left side tympanitic, and mea-

suring in circumference three fourths of an inch at its fullest part more than the right. A small puncture was made through the parietes of the left chest, and air rushed out audibly, and with sufficient force and volume to extinguish a lighted candle held near the orifice, the walls of the thorax on this side proportionally subsiding.

The left pleural cavity contained 1½ to 2 ounces of limpid yellowish fluid; soft lymph was adherent to the pulmonary pleura, and in less amount to the costal also, in flakes and more diffused patches, and the membrane was reddened in spots. The lung had collapsed, containing little or no air; but it was perfectly free from any adhesion, excepting at a circumscribed spot just below the apex, in front, where there was a firm, fleshy looking mass of fibrin, about a quarter of an inch in length, which connected the two surfaces of the pleura. Immediately beneath this adhesion was the perforation. The orifice was about as large as a crow's quill, round, its margins thin; it communicated, through the pleura, which was two lines in thickness, with an irregularly-shaped cavity as large as a hazel nut, free from any adventitious lining membrane, containing no secretion, and opening into a very small bronchial twig. The pulmonary tissue around this cavity was in an apparently healthy condition, excepting that it was of a dusky red color. At different points in the lung were several small crude, unsoftened tubercles; no tubercular granulations.

The right pulmonary pleura was closely adherent to the walls of the chest, by firm, old adventitious tissue, without any evidence of recent inflammation. The lung was filled with air, and its texture generally presented no abnormal appearance, excepting from a moderate degree of vascular turgescence, and the presence of a few crude, unsoftened tubercles scattered here and there, in the midst of a crepitating pulmonary tissue. Near the apex, posteriorly, was, moreover, a small cavity of rather greater capacity than that in the left lung; around it, the texture was normally pliable and aerated; the outer wall of the vomica consisted merely of the pleura, which was thickened; the adhesions upon this side probably saved the boy from *pneumothorax* of the right cavity.

The lining membrane of the bronchial tube was uninflamed, although somewhat injected here and there.

The bronchial glands were generally enlarged, some of them tuberculous. No tubercles were found in the other organs.

The space already taken up by the simple narration of this case, precludes anything more than a mere allusion to its most interesting features. These are, the insidious manner in which the tuberculosis had progressed; the absence of symptoms, so far as we can learn, of the pleurisy of the right side, or of the local pleurisy at the summit of the left chest; the protective influence of the right pleurisy, as respects the superficial cavity in the corresponding lung; the occurrence of the perforation of the left pulmonary pleura, and the rapid supervention of the fatal termination. A *very minute* physical examination of the apices of the lungs, during life, would probably have revealed the existence of the cavities there; but this knowledge would scarcely have availed anything with reference to the treatment of the disease, or to the prevention of the pneumothorax. From all the facts of the case, it seems most reasonable to suppose that the rupture of the left pleura over the abscess, occurred during an act of violent coughing, early on Monday morning.

Note on Sulphate of Bebeerine. By Henry S. Patterson, M. D., Professor of Materia Medica in Pennsylvania Medical College.

At a time when the discovery of a substitute for Sulphate of Quinia is a topic of general discussion, it may not be inappropriate to call the attention of the profession to a substance, heretofore noticed, but too generally neglected. The Sulphate of Bebeerine has been shown, by Dr. Maclagan, of Edinburgh, to be a medicine of very considerable anti-periodic power, closely resembling the corresponding salt of Quinia, and in many respects equal to it,—possibly superior. It is obtained from the Bebeeru or Green-heart (*Nectandra Rodiei*) of British Guiana, a tree of considerable size and extremely abundant. The bark yields the alkaloid largely, but it is particularly abundant in the nut. A decoction of the latter is the ordinary popular remedy for intermittent fever in Demarara, and, as I am informed by an intelligent gentleman of that place, seldom, if ever, fails to

arrest the disease. The nut may be collected in almost indefinite quantities, and could be obtained here, if a demand were created, for little more than the expense of collection and transportation. The process for separating the alkaloid is almost identical with that for quinia, and not more expensive. If, therefore, it proves on trial equal in efficacy to that alkaloid, we will have a cheap and effective substitute within the reach of all. The subject certainly deserves a more extended investigation than it has hitherto received. The object of the present communication is to invite attention to it, and induce the profession, in miasmatic districts, to give the remedy a fair trial.

Sulphate of Bebeerine occurs in shining brown plates, (sometimes with a greenish tinge,) is inodorous, and has a bitter, harsh, somewhat astringent taste. Like the Sulphate of Quinia, it requires an excess of acid for its perfect solution. It may be given in pill, solution, or powder. That it is a good general tonic, in small doses, is very evident. In the full anti-periodic dose it is more apt to disturb the stomach than the same quantity of Sulphate of Quinia, and occasionally vomits; but it possesses the advantage of being much less stimulating, and does not affect the head as that salt does. Dr. Maclagan asserts that it is "not so liable to excite the circulation or affect the nervous system," and Dr. Neligan adds, that "this conclusion is fully borne out by his experience." The patients who have used it under my care expressly state that it did not occasion in them the same headache and vertigo as the quinia had previously done. Its dose is stated at gr. i.—v., three or four times in the day. Neligan directs it made into pill with conserve of roses, or in solution with the addition of a few drops of Acid. Sulph. Arom. The anti-periodic dose may be stated at gr. xv.—xx.

A letter from my friend and former pupil, Dr. H. J. Richards, of Grey Town, Nicaragua, of the date of March 25th, 1852, contains the following: "I have used the Bebeerine, as you suggested, with uniform success in quotidian intermittents. I have since had no opportunity to prescribe it in remittents. All the intermittents of this coast, however, are comparatively easily treated at this season, and yield readily to both quinine and arsenic. The remittents and even intermittents of the fall months, are more virulent and often speedily fatal." Those

months will certainly furnish a fairer test of Bebeerine; but it is something to know that, under existing circumstances, it produces the same effect as the Quinia.

Dr. Watt of Demarara thinks that it is tardier in its effects than the Quinia, not interrupting the paroxysms so immediately, but he also thinks that its effects are more permanent. The cases in which I have had an opportunity of using it, seem to confirm the latter opinion.

1st. A gentleman residing in Blockley township consulted me in September last concerning an obstinate and constantly recurring tertian intermittent, under which he had labored for a length of time. He stated that the Quinia always interrupted the disease, but that it inevitably recurred in two or four weeks. I gave him Sulph. Bebeer. ʒss. dissolved in ʒviij. water, a tablespoonful to be taken every four hours during the apyrexia. The next paroxysm was prevented, and he has had no return of the disease up to the present time (April).

2d. A. J. applied to me in October last, with a very similar statement. While residing in New Jersey, about six years since, he had a violent and protracted "bilious fever," since which time he has had, every month or two, an attack of "intermittent fever," which has been generally speedily arrested by quinine. Such was his account of the case. I found his tongue furred, his eyes icterode, his breath offensive, his urine scanty and high colored. The anorexia was complete and thirst considerable. He had a daily slight chilliness, followed by considerable fever and a slight sweat. I gave him a mercurial purge and on the next day fifteen grains of the Sulphate of Bebeerine. He complained of some nausea, but no disturbance of the head. The same quantity of Bebeerine was given on the two succeeding days, when, the paroxysms no longer recurring, it was discontinued. He remains free up to this period (April), and says that he enjoys better health than he has done for years.

If the permanent character of effect, which these cases seem to indicate, should be established by a more extended experience, we will have in the Bebeerine an agent of very great value, adapted to cases which have hitherto seemed uncontrollable, except by arsenic, to which there are so many objections. It is also much more speedy in its effects than the arsenic. Bou-

chardat (Ann. de Therap.) expresses his surprise that the Bebeerine has been so entirely neglected in France, where trial is daily made in agues with substances of inferior efficacy. I trust that the same remark may not long be made with regard to the American profession, but that the precise value of the medicine may soon be established by an adequate extent of observation.

Case of Strangulated Crural Hernia successfully treated by Chloroform. Communicated by ROBERT BURNS, M. D., of Frankford, Pa.

Joseph Eastburn, a middle aged German, employed in the chemical establishment of Mr. Lennig, of Bridesburg, of a spare habit but firm muscular fibre, had been afflicted with hernia for several years, and subject to diarrhœa. Not using the protection of a truss, his hernia became strangulated on Friday, the 26th inst., and being unable to reduce it as he had himself been in the habit of doing on former occasions, his family physician, Dr. Wiley, was called in, who by venesection, ice, taxis, &c., made every effort to restore the intestine, but without effect. On the evening of the 27th, Dr. Burns of Frankford was called in, when, on consultation, it was determined to bring the system under the influence of enemata of tobacco, and the internal use of tartarized antimony, and thus endeavor to reduce the hernia, which was ascertained to be a crural one. Our best directed efforts were still unavailing, and the operation being the last resort, it was arranged to send for Dr. Keller, of Philadelphia; and at early hour on the 29th, endeavor to rescue the sufferer from impending danger. By some delay in receiving the communication, Dr. K. did not arrive until after 8 o'clock A. M. In the mean time every preparation was made to operate should Dr. K. not come, or no other procedure avail. Dr. K. on examination of the patient, confirmed the diagnosis, and after considerable effort to reduce, the course was abandoned as altogether impracticable. From the tension and tenderness of the abdomen, we feared extensive intestinal and peritoneal inflammation; and before resorting to the knife, it was suggested to make a trial of chloroform; which being agreed upon, Dr. Burns hurried to Frankford, and

procured a reliable article, which was used in the following manner:—A piece of muslin sufficiently large to cover the hernial tumor was saturated with the chloroform, and applied to the part, over which a small compress was placed, to retard evaporation. Of this part Dr. Keller took charge, while at the same time, Dr. Burns applied the same agent to the mouth and nares, dropped on a piece of muslin, causing the patient to inhale it as freely as possible; thrice he inhaled fresh portions, and was brought under its influence, which made him very restless with constant endeavors to push us away, and struggling to rise up. At this moment, Dr. K. made the effort at reduction, which was entirely successful, and the opening under Poupart's ligament was plainly distinguishable, so as to admit the point of the finger. Our gratification was very great, our patient spared a painful and dangerous operation, his family and friends were full of hope, and another instance was added to the multitude of the past, in favor of the wonderful effects and immense value of chloroform, in the mitigation of human suffering. Could our sketch close here, our exultation would be complete; but far otherwise was the intelligence obtained on the morning of 29th, when to our sorrow, the radiance of hope was obliterated, by the sable curtain of death. Dr. Wiley informed the writer, that the compress and bandage which were applied by Dr. Keller until a truss could be procured, were detached by the patient getting out of bed, and the hernia reappeared, but was easily reduced by him; the patient however sank rapidly, and died at 1 o'clock, A. M., on the 29th. Dr. Wiley and the writer made a post mortem examination of the abdominal cavity, and a minute dissection of the inguinal region. The peritoneum was universally inflamed, together with the greater portion of the intestines, some parts of which were gangrenous, especially that portion of the ilium which was constricted. Both peritoneal and intestinal adhesions were extensive, besides perforations of the cœcum, with of course effusions and deposits of coagulable lymph; the hernial sac, as it protruded through the crural ring, was about the size of a hickory nut, and in thickness the sixteenth of an inch, its inner surface slightly inflamed, and the point of constriction evidently at the neck under Poupart's ligament, the falciform process of fascia lata being free.

Thus, from the condition of the abdominal viscera, no means

could have availed to save the patient, within the last twenty-four or thirty-six hours of his existence, at least if he had been operated on, death would have ensued, and the operation perhaps unjustly blamed. But may we not feel encouraged to expect from the use of the chloroform, at an early period of strangulated hernia, strong probability of success; as in this case it accomplished more than all other means.

Remarks on the Climate and Epidemic Diseases of Rangoon, Burman Empire. By JOHN DAWSON, M. D. Communicated by J. Remington, M. D., of Philadelphia.

In the provinces of Burmah bordering on the sea coast, the seasons are uniformly regular in their appearance, and steady in their continuance. The year is divided into two seasons, viz. the dry and wet. From May to October is the south-west, or wet monsoon; from November to April is the north-east, or dry monsoon. In the rains, it sometimes pours down literally in *torrents* and for hours together. The average fall of rain from year to year, for a period of ten years, is about 175 inches, the minimum being 160, and the maximum 502 inches. The first half of the dry season is commonly called here "the cool season," which corresponds in some respects to the winter of temperate latitudes. The next half is hot, *hot*, *hot*, week in and week out, and no rain. The whole face of the country becomes parched and dry. The very leaves of the trees wither from the effects of a scorching sun, and the birds pant and droop their heads for want of a cool shade. After the first few showers of rain have fallen in May, all nature wakes up to new life and begins to revive. At the end of that month and early in June, the country is once more clothed in luxuriant verdure. But from an extreme of dryness and heat, we find ourselves very speedily led into an extreme of dampness and wet. Every thing feels damp and becomes mouldy. Books go to pieces in two or three years. Furniture held together by glue, or other adhesive matter, opens at the joints. At the coldest season of the year, the thermometer is down to 60°. In the hottest it is up to 112°. These are the lowest and highest points in which the mercury ranges in

this climate. Rangoon lies in latitude 62° 47′ North, and longitude 97° 15′ East of London.

Of epidemic diseases, there are but two which seem to visit Burmah, at least so far as I am now competent to judge, i. e., cholera, and small pox. There does not, however, appear to be any definite regularity in the time of their visitations. Except in the Tenasserim and Akracan Provinces, which are under the jurisdiction of the British Government, vaccination is entirely unknown. Inoculation is occasionally practised, though the manner of doing it, and the extent to which it is carried, I am at present unable to say. As the Burmese practitioners, however, appear to care little for the public welfare, and the government still less, there cannot be much done in this way to protect the people, or to modify the nature of that scourge. In the whole kingdom of Burmah, there is no hospital, no public dispensary, no almshouse, no asylum in existence, to which the suffering can look for aid, the "Missionary Dispensary" excepted. No provision is made by any one, either official or private, for meeting the wants of the poor, the afflicted, and the miserable. To be afflicted with leprosy, (and there are many such cases,) is "*a crime*," which exposes the sufferer to fine, imprisonment and slavery. To be insane is a *sin*, a *curse*, for which you receive but little pity or commiseration. The person so deranged, is supposed to be under the dominion of "*nats*," or evil spirits, for misdeeds committed in a former state of being; and he is allowed to drag out a wretched existence as a species of punishment. Such is the amount of their sympathy, and such is the form of their benevolence for some of the worst afflictions to which our fallen humanity is subjected.

Of the prevailing classes of disease, there is nothing that is specially interesting to mention. Fevers are more commonly met with in the dry season, and abdominal complaints in the wet. Excepting a few cases of asthma and catarrh, pulmonary affections are rather rare. Diseases of the liver and spleen are more frequent. One case of well defined enlargement of the pancreas has come under my observation. The symptoms seemed to be very analogous to those of chronic dyspepsia, and obstructions in the transverse portion of the colon. The organ could be felt distinctly throughout the entire length. It had an

indurated feeling, and pressure communicated soreness to the patient. I imagined that it was about four times its ordinary size. There were also evidences of an accumulation of fluid in the abdominal cavity. As the man came to see me but twice, taking on each occasion some laxative pills with him, the result of the case is not known. He lives at a distance in the jungle. An exceedingly painful disease of the stomach, which I have regarded as "*Gastralgia*," is very common among the inhabitants of this country. In a large number of cases, it baffles all the efforts of the Burmese practitioners to remove it, and when once it becomes chronic, it eventuates in a lingering train of dyspeptic symptoms with general emaciation and debility. The primary cause of it, is doubtless attributable to the kind of condiments which they use with their food. These are mostly sour fruits and sour vegetables, rendered pungent and stimulating by the addition of capsicum, onions, garlic, &c., which provoke acidity, and lead to local irritation in the submucous tissue. Moreover the Burmese are a nation of "*smokers*." All smoke, from first to last, from oldest to youngest of them, and as soon as they are capable of being inducted into the fashion, children begin to chew betel—a compound, composed of slaked lime, catechu, tobacco, areca-nut, and the leaf of the betel vine, portions of each being put into the mouth at the same time, and all chewed together. It imparts a very beautiful vermilion tint (consequent on the reaction between the alkali and vegetable) to the mouth and lips. These habits of smoking and chewing in persons so young, conduce to deprive the stomach of a large quantity of saliva that is necessary to healthy digestion, and aided by their peculiar diet, must sooner or later develope the very trying gastralgic complaint called by the people "*Yeen-liat-na*," which might be looked upon, as a "*national* disease" among the Burmans. I have treated it as all my medical brethren would, and pretty generally with success, by antacids, laxatives, local depletion and counter-irritants, forbidding the use of any article that would be likely to interfere with the treatment, or prolong the affection.

In the surgical department the cases have been far more numerous, than those that are strictly medical, of those who have sought assistance at the dispensary. They are not only greater in numbers, but more various and interesting in character. To pre-

sent you with a bird's eye view of this division of practice, I will just give the names of the most common diseases of this class, that come seeking help. The eye has the greatest variety, viz.: Granular lids; simple conjunctivitis; opacity of the cornea in its different forms of nebula, leucoma, oblonga and staphyloma both of the cornea and sclerotic membranes, spherical and conical in shape; ectropium, pterygium, iritis, ulceration of cornea, capsular and lenticular cataract, amaurosis, and two or three kinds of ophthalmia, &c. Of other parts, the register kept exhibits cancer, internal hernia, stricture of the urethra, calculi in bladder, ulcers of different grades, simple and compound fractures, luxatio, subluxatio, primary and consecutive syphilis, gonorrhœa, hydarthrus, otalgia, periostitis, necrosis, deafness, incised wounds, abscess, &c. Most of these cases are of a very difficult and complicated nature, and a majority of them are of many years standing. The Burmese doctors here in vain tried to relieve them; and as a last resource some of them have come hundreds of miles to see and consult the "white doctor from a foreign county." The confidence they manifest towards me is at once remarkable and encouraging. But there is one serious drawback in the management of their cases, and that is, the reluctance they invariably evince to the performance of operations. They have a terrible dread of the knife, and on no account will they submit to be cut, unless you pledge them success. As this cannot be done for various reasons, the opportunities for using the knife are very limited. In this country, too, justice is a mere symbol, for in the event of a prosecution, however unreasonable it may be in a civilized community, the object is to fleece the foreigner. As an instance of it, the following facts will show. A few days ago, two or three European gentlemen went out in the morning for a ride. Two of them reside here as merchants. The third was a stranger, belonging to the Bengal Pilot service, who left his station for the benefit of the voyage to sea. In proceeding slowly along the road, a Burmese woman ran up against his poney, (notwithstanding his efforts to get out of her way), and fell down. The rider instantly stopped and dismounted to ascertain whether the woman was hurt. As there appeared to be little the matter, he said at once, as she was poor, that he

would give her a present of twenty rupees, about ten dollars. The woman seemed surprised and glad at her good fortune, and quite satisfied. Soon, however, a crowd gathered round, persuaded her to sit in a blanket, and that they would take her to the deputy governor to make her complaint, when she would get plenty of money out of the "*white foreigner.*" The case was heard. The English gentleman was floored. The deputy governor decreed that he should pay one hundred and ten rupees, or go into the stocks. He urged that a medical man should be requested to examine the extent of injury, if any had been received, and he would pay any amount. But no, the money must be paid, or he should be sent to jail, and placed in the stocks. To prevent his being so degraded, the gentleman paid the money. The woman got ten, the governor and his officers pocketed the remainder. Such is heathen justice. It speaks for itself. The maxim inculcated on us all in the Bible, "to be wise as a serpent and harmless as a dove," is not more necessary to be followed in any part of the wide world, than it is in this benighted land.

In regard to your inquiry, touching the existence of scarlatina in India, based on the assertion of Dr. Gregory, that it has never been seen, I am sorry that I should have to differ in my opinion from so distinguished an authority. But this is the more excusable from the fact that the Professor was never in the East, and had to depend wholly on the statement of others in the preparation of his work on the practice of medicine. A few cases given in detail would be, of course, conclusive evidence of its being noticed, but not having these to offer at present, I am constrained to withhold all conjecture till it is my power to furnish them. If I mistake not, the disease has been met with in southern India. In Maulmein, the principal city of the British Provinces in Burmah, it has occurred in several instances, among the children of Missionaries at that station. Hereafter I shall feel awake to this subject, and advise you of any cases which may come under my observation.

Since opening the "*Dispensary*" at this station on the 1st of June last, I have kept, not a nominal, but a numerical list of the actual number of applicants daily for relief. The lists are written separately for each month; and for the five months which have

elapsed, they show an aggregate of six thousand, one hundred and thirty-four persons, whose cases have received attention, and more or less medicine. Of this number, the same individual may have appeared several different times. This arrangement I dislike, because it is not a clear exponent of the real number of cases that have been under treatment. But in a country like Burmah it is unavoidable, where to write down men's names would excite suspicion that there was some ulterior political object in view. The notes of several interesting cases are before me, some anomalous, others characteristic and well marked, but I regret that I have not now the time to copy them for transmission.

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*Report of Cases, in continuation of the Remarks on Epithelial Tumors and Cancer of the Skin.** By J. Da Costa, M. D., of Philadelphia.

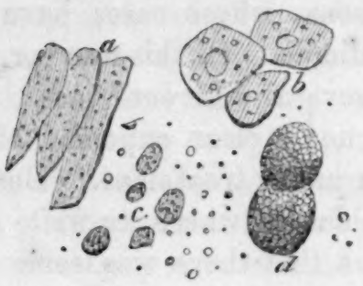
Case I. J. H——, æt. 24, a strong, healthy man, presented himself at the clinic of the Jefferson Medical College, Oct. 5th, 1850, with a tumor on the lower lip, which had been growing for three years. He stated that it commenced as a wart, and that its subsequent increase had never occasioned much pain. Dr. Pancoast removed the whole diseased mass by a V shaped incision; the wound healed kindly, and the patient has remained well ever since.

The tumor, when removed, presented a rough appearance; on its exterior were several red crusts, the interior was hard and nodulated; the mucous membrane lining its internal surface was thickened.

Microscopical Examination.—On submitting the crusts on the exterior to the microscope, they were found to consist of dried up epithelial cells, and blood globules. The cells were dark and non-nucleated; (Fig. 3 *a*), acetic acid did not change them.

* The nine cases here selected, were those that seemed to me the most interesting of the 34 cases I spoke of in my previous paper. For the greater part of the specimens, as well as for some particulars about the history of these cases, I am indebted to Drs. Mütter and Pancoast.

Fig. 3



a. Old epithelial cells from the surface of the tumor, magnified 200 diam.
b. Cells from the interior of the tumor.
c. Globular cells.
d. Compound granular cells.

A section from the interior of the tumor, made with a Valentin's knife, showed epithelial cells, fibrous cysts, and globular cells. The epithelial cells here were in masses, and not very large; (Fig 3 *b*) their nuclei, however, were distinct; some had nucleoli. The fibrous cysts were, like those represented in Fig. 2, (in the preceding number of the Medical Examiner,) very irregular, and delicate; some were empty, some enclosed epithelial cells. The globular cells, (Fig. 3 *c*) were about 1-4200th part of an English inch in diameter, and mostly non-nucleated. In some of the softer parts of the tumor were seen masses of granules, and very large granular cells, (*d*) with a distinct cell wall.

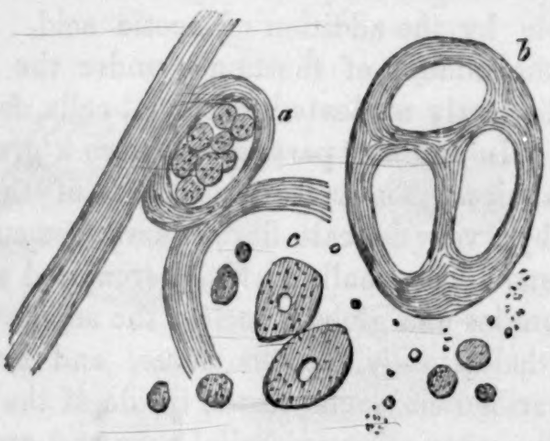
Case II. Mr. B——, a seafaring man, æt. 43, who had always enjoyed very good health, consulted Dr. Pancoast, February 3d, 1851, for a tumor of the lower lip, that had been coming gradually for two years. He had been much addicted to smoking short pipes. The tumor was removed, February 6th, by the usual incision, and the parts brought together by the twisted suture. The wound healed well, but as the edges subsequently thickened, Dr. Pancoast removed the cicatrix as a matter of precaution. The patient, when last seen, was perfectly cured.

The tumor was small, but, as in the preceding case, rough on the surface and very hard; it had not begun to ulcerate, nor had any red crusts formed as yet on its exterior.

Microscopical Examination.—The tumor, examined under the microscope, consisted mainly of epithelial cells, globular cells, and fibrous tissue. The epithelial and globular cells were like

those represented (Fig. 3, *b* and *c*); they presented nothing peculiar. The fibrous tissue, however, which existed in great abundance and formed the larger part of the tumor, was remarkably strong: In many places it united to form cysts, most of which were oval. These cysts were formed of very delicate fibres, and contained mostly globular cells. (Fig. 4, *a*.) Some by the interlacing of the fibres, formed in their interior several smaller cysts; (Fig. 4, *b*); in some again the cysts had opened (*c*) and discharged their contents.

Fig. 4.



a. Cyst from the interior of the tumor filled with globular cells, magnified 220 diam.

b. Oval cyst enclosing three smaller ones.

c. Cyst with ruptured wall, and contents discharged.

Case III. H. S——, æt. 52, a robust healthy looking man, had his lower lip parched by the heat of the sun, whilst wheeling wood on the wharf last August. The lip soon became swollen, and a small tumor formed, which gradually enlarged. It did not give rise to much pain, except during sudden changes of temperature. He applied, December 13th, 1851, to the clinic of the Jefferson Medical College, when the whole morbid substance was removed by Dr. Mütter, by a quadrangular incision, and a plastic operation performed to fill up the gap. Previous to the operation there had been some tumefaction of the cervical glands, but this speedily subsided. The wound had united throughout by the 17th of December. March 25th, I saw the patient, and he was in perfect health.

The tumor was about the size of a cherry, and had begun to ulcerate; its exterior was tuberculated; towards the right side was a dark red crust; towards the left, separate from the mass of the tumor, a little hard spot; on the internal surface of the lip there was a circumscribed rough projection.

Microscopical Examination.—The crust was composed of dark, long epithelial cells, resembling those in Fig. 3, and mostly without nuclei. Its red color was evidently owing to blood globules, as no blood vessels were perceptible. In a section below this crust, I found epithelial cells, so closely arranged as to resemble fibrous tissue, (see Fig. 2, in preceding number of Examiner), and only discernible by the addition of acetic acid. On placing a portion from the middle of the tumor under the microscope, I found large, distinctly nucleated epithelial cells, free nuclei, and globular cells. In another part, there were a great many free nuclei and granules. The cells in all parts of the tumor, were held together by a very delicate fibrous arrangement, which formed but few cysts. The small, dark, tuberculated spots consisted entirely of granules and globular cells; the separated hard mass contained epithelial cells, fibrous tissue, and granules. The rough circumscribed eminence on the inside of the lip, presented enlarged papillæ, also a few epithelial cells and granular matter.

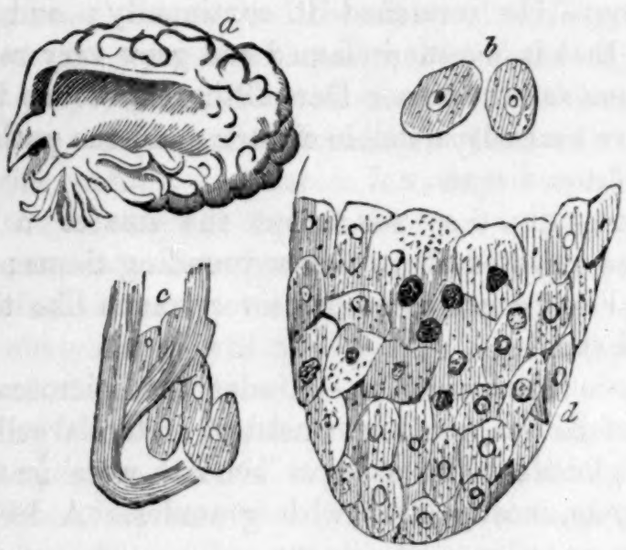
Case IV. E. J.——, æt. 80, came to the clinic of the Jefferson Medical College, November 12th, 1851, with a large tumor on the lower lip, which had been forming for two years. It gave him no pain, but occasioned great inconvenience in swallowing, especially during the last two months of its growth. He had been in the habit of constantly smoking short pipes. The tumor was removed by Dr. Mütter November 15th. December 1st, the wound had united throughout by the first intention. He left the city December 10th, when last heard of, the disease had not returned.

The tumor, when removed presented very much the appearance of a ripe mulberry; it was about an inch in thickness and occupied the whole lower lip. On its surface, as in the cases previously noticed, were several dried crusts. On dividing it, I found a great many enlarged papillæ, visible even to the naked eye. At Fig. 5, *a*, I have represented the appearance of one half of the tumor cut in this way. The inside

of the lip was smooth in some parts, but roughened in others, by projections of these papillæ.

Microscopical Examination.—The exterior crusty part was formed, in this instance also, of dark epithelial cells and blood-globules. The convolutions, which gave to the tumor a mulberry appearance, consisted of epithelial cells held together by fibrous tissue. A section from the middle of the tumor, showed large epithelial and globular cells. Some of these epithelial cells were round, (Fig. 5, *b*) with large nuclei, even nucleoli, and resembled cancer cells very much, for which, if seen alone, they might readily be taken.

Fig. 5,



a. Interior of the tumor showing enlarged papillæ, natural size.
b. Round cells with nuclei and nucleoli; magnified 220 diameters.
c. Fibrous bands enclosing cells.
d. A papilla, treated with acetic acid; magnified 200 diameters.

The softer parts of the tumor were composed of globular cells and granules; the harder portions were made up of fibrous tissue and of cysts, filled with globular cells. The interior of the lip, which as I have said before, was much roughened, showed fibrous bands loosely enclosing epithelial cells. (Fig. 5, *c*.) These fibres supported the cells, and would, if condensed by pressure, have formed cysts around them. The papillæ found in the central part of the tumor were very distinct. I succeeded in placing an entire one under the field of the microscope, and

was very much struck with its apparent fibrous structure; it was only after allowing acetic acid to act on it for some time, that I found it to consist (Fig. 5, *d*) of flattened epithelial cells, with a few globular cells and free nuclei.

Measurement of Cells found in this Tumor.

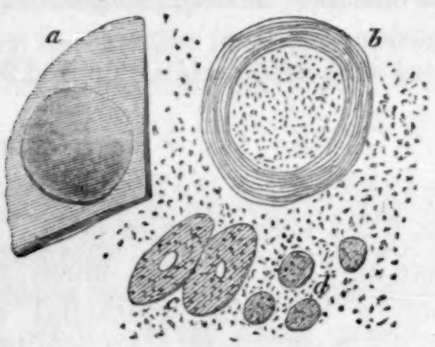
Epithelial cells from the middle of tumor	Cell 1-1000th, nucleus 1-5000th part of an inch in diam.
Round cells with nucleus and nucleolus	Cell 1-1200th, nucleus 1-3950th, nucleolus 17900th.
Globular cells	Cell 1-4800th and 1-3750th.
Epithelial cells on papillæ . . .	Cell 1-1300th, n. 1-5200th.

Case V. Mr. W. æt. 83, consulted Dr. Pancoast, Dec. 21st, 1850, for a tumor on his right cheek. Six months previously, he first noticed a little red pimple, which gave rise to intense itching. He scratched it continually; and the consequence was that it became inflamed and grew very rapidly. Dr. Pancoast removed the tumor Dec. 29th; the wound healed well, so as to leave scarcely a visible cicatrix, and the patient has had no return of the disease.

The tumor (Fig. 6 *a*) was about the size of a dime, red, vascular, and elevated above the surrounding tissue; its interior was softened and contained a juice very much like that seen in encephaloid cancer.

Microscopical Examination.—Under the microscope, the red vascular surface was found to consist of epithelial cells, granules, and blood globules. In a layer beneath were many globular cells, and cysts, mostly filled with granules. A deeper section

Fig. 6.



a. The tumor after its removal; natural size.
b. Cysts filled with granules; magnified 220 diameters.
c. Small dark epithelial cells from the softened part of the tumor.
d. Large globular cells.

showed distinctly nucleated epithelial cells, like those seen Fig. 4 *b*, and a great many large granules, which are always present in tumors of the face. The juice in the interior of the tumor consisted mainly of dark epithelial cells (Fig 6 *b*), and very large globular cells (*d*), measuring more than the 1-4000th part of an inch, and larger than I have yet seen them in any tumor.

Case VI. Miss H. G——, æt. 22, was operated on by Dr. Mütter, Nov. 19th, for the removal of a cupped tumor from the chin, about the size of quarter of a dollar. The tumor first attracted attention thus: About ten weeks before the operation, the patient, whilst sitting in church, was annoyed by intense itching at the incisive fossa, which was aggravated by rubbing. Upon coming home, she noticed the skin in the fossa above the chin to be dry and covered with scales like those of pityriasis. Her pride prompted her to cover the spot with court plaster, which served to increase the irritation, without in any degree alleviating the itching. After a few days the skin became broken, and the itching was supplanted by a deep smarting pain. Irritating ointments and washes were unremittingly applied, and changed by the successive advice of a number of physicians, quacks, and old women, until the itching spot became an open sore, with hard elevated edges, enclosing an area of flabby granulations, from which a thin fluid was discharged, occasionally intermingled with pus. It is well to remark that the patient has always been very scrofulous, had then enlargement of the glands under the chin, and a spot in the axilla resembling the one described in its first stage; it had, however, not been subjected to irritating ointments and washes. The operation consisted in taking out the whole of the tumor from the chin by a circular incision, and then bringing the sides of the wound together by means of harelip pins: the incision healed well and almost throughout by the first intention.

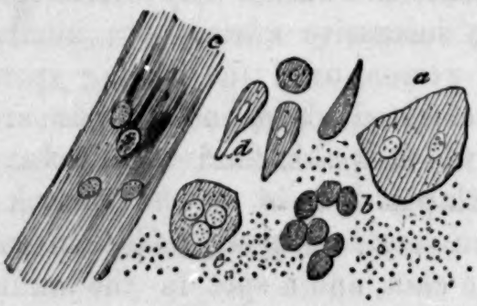
Dec. 16th, Dr. Mütter took out of her lip again a little hard tumor, which had formed since the first operation. Since this period no return has taken place; the enlarged glands under the chin and in the axilla, have, as far as I could learn, disappeared.

The first tumor was, as before observed, surrounded with

a hard distinct ring; the interior was red and granulated; the tissue around its base was red, sensitive, and presented numerous minute vessels ramifying beneath the cuticle. The second tumor was hard and about the size of a pea.

Microscopical Examination.—A piece from the exterior of one of the granulations of the tumor on the chin, contained epithelial cells with large double nuclei (Fig 7 *a*), some with nucleoli. These nuclei measured the 1-3500th of an inch in diameter, and were very distinct. Besides these cells I found great masses of globular cells (*b*), which were dark and indistinctly nucleated. The hard ring around the tumor consisted of fibrous tissue, with free nuclei and globular cells infiltrated into it. (Fig. 7, *c*.) In the tissue next to the hard ring, I found pale, non-granulated, fibro-plastic cells (*d*) and globules, also (*e*) a small fibro-plastic mother-cell. These fibro-plastic cells resembled cancer cells very much; they were, however, more indistinct, and had fainter outlines than cancer cells usually have. The tumor taken from

Fig. 7.



a. Large cell with double nucleus, magnified 220 diameters.

b. Dark globular cells.

c. Fibrous tissue with cells infiltrated into it; from the ring surrounding the tumor.

d. Fibro-plastic cells.

e. A fibro-plastic mother-cell.

the lip was composed of small but distinct epithelial cells, of globular cells, and of pale cells, which I took to be fibro-plastic.

This tumor was very interesting in many respects. Firstly, from the rapidity of its growth; secondly, from being accompanied with enlargement of the glands; thirdly, from its apparent return; and fourthly, from its partially obscure micro-

scopical character, some of the elements of which (Fig. 7, *e*) might with a little more distinctness, have caused it to be regarded as a cancerous tumor. It was, however, not cancerous. The rapidity of its growth was caused by the irritants applied. Its return was purely local; very probably a few cells had been infiltrated into the tissue of the lip, before the tumor of the chin was removed. The enlargement of the glands was not owing to the presence of the tumor, but more to the scrofulous constitution of the patient; the cells, too, were in their character more like those appertaining to a benign tumor.

Case VI. H. P——, æt. 73, a shoemaker by trade, came, Oct. 12th, 1850, to the Clinic of the Jefferson Medical College, with an apparently carcinomatous tumor near the region of the umbilicus. He had, to use his own words, never known a day's sickness. Seven or eight years before, he noticed a small tumor forming on the part against which he had been in the habit of wearing his board, whilst working. It gave him no pain but produced a continued itching, which he relieved by scratching. A year before its removal it began to ulcerate, and was very troublesome to him, especially whilst working. It was taken out, Oct. 13th, by Dr. Pancoast. Up to Dec. 12th, 1851, the patient remained well; the disease had not returned.

Microscopical Examination.—The external surface of the tumor was composed of small dark epithelial cells. Beneath this were large masses of straight white fibrous tissue, with transverse fibres crossing it; a great many pale fibro-plastic cells, like those Fig. 7, *d*; and in some parts epithelial cells and globular cells. The epithelial cells formed in the centre of the tumor were like those on the surface (Fig. 6, *c*), dark and with small nuclei; many of them were not nucleated at all. The tumor was a mixture of a fibro-plastic and epithelial tumor, and was interesting from the fact, that it was evidently caused by direct pressure.

Case VIII. Mr. E——, æt. 62, a robust healthy man, noticed, 23 years ago, a little white spot in the middle of the tongue, which produced continually a sense of roughness, and gave rise to great inconvenience in swallowing, but not to any constant

pain. This spot gradually enlarged and several others formed in neighboring portions of the tongue. He applied for advice to a great many physicians, who cauterized the part, but did not prevent the disease from extending. A year ago he became the patient of Dr. Mütter, who cut out the little white lumps several times. This treatment proved very successful: the small white spots have totally disappeared, and he swallows with ease, which formerly he could only effect with great difficulty.

The part, when removed, consisted of a whitish, creamlike looking substance, sticky to the touch and of a crumbling nature. The top had a crusty appearance, darker than the centre, and elevated above the surrounding substance of the tongue.

Microscopical Examination.—I have at different times examined the whitish substance removed, and always found the same elements. The top consisted of dried-up epithelial cells, (Fig. 3, *a*); beneath that, epithelial cells with large nuclei, (Fig. 3, *b*); granules and globular cells. On one occasion I observed cells infiltrated into the muscular fibre of the tongue; and this is the probable cause of the apparent return of the disease after the removal of some of the parts; which return, however, was always entirely local.

As a well-marked case of a cancerous tumor, I have selected the following:

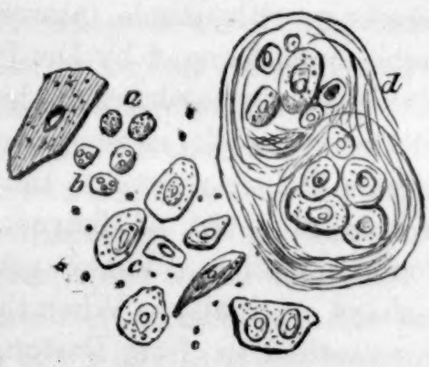
Case IX. T. V——, æt. 53, a pale, sickly-looking man, was operated on at the Clinic of the Jefferson Medical College, on the 1st of February, 1851, for a cancer of the lip, which had been coming for four months, and was attended with sharp lancinating pains. A lymphatic gland of the lower border of the jaw was found slightly enlarged, but the patient refused to have this taken out. On the 19th of March, as he thought the gland was growing very rapidly, he appeared willing for a second operation. At this time there was a tumor under the chin, formed by several enlarged glands, and connected with the submaxillary, which itself was hard and about the size of a walnut. A semilunar incision was made by Dr. Pancoast, over the tumor, and the parts opened. The disease proved as extensive as was anticipated. The sublingual and adjoining lymphatic glands, as

well as the sub-maxillary, were found involved, and were accordingly removed. The incision healed well, but seven weeks after the cicatrix opened, and a reddish fungous mass came from the seat of the wound. This mass grew rapidly, and attained the size of a fist; the discharge that came from it was very offensive. A lump also formed behind his ear and one on his neck; both grew quickly, were attended with lancinating pain, and opened three weeks after their first appearance. The patient was very much emaciated, but bore his sufferings with fortitude. A week before his death, he undertook a journey to a quack in New Jersey, who applied very energetic caustics to the parts affected, and caused them to inflame violently; a circumstance which no doubt hastened the fatal termination. He died Dec. 21st, 1851; the tumor on the neck was found to have extended below the clavicle.

The tumor on the lip was not very large; it had begun to ulcerate on the surface; the submaxillary gland taken out in the second operation, was hardened, but presented no other morbid appearance to the naked eye.

Microscopical Examination.—The exterior of the tumor of the lip was composed, as in epithelial tumors of the lip, of epithelial cells; in the part that had begun to ulcerate, there were pus cells (Fig. 8, *a* and *b*), and a few small cancer cells. The central part consisted of granules, compound granular cells, and of many cancer cells with large nuclei. The internal surface of the tu-

Fig. 8.



a. Pus cells magnified 220 diameters.
b. Pus cells treated with acetic acid.
c. Cancer cells from the interior of the tumor.
d. Cancer cells in loose cysts, from the submaxillary glands.

mor contained fibrous tissue and cysts, filled with cancerous matter. In some sections I found the muscular fibre, entering into the composition of the lip, infiltrated with cancer cells, but yet preserving its natural appearance; in others it was completely altered in structure,—a change which I have frequently noticed in cancerous tumors. A section from the submaxillary gland proved this, too, to be cancerous. It contained many cancer cells and granules, like those in the tumor of the lip. In some parts were strong fibrous tissue; in others, again, a very delicate fibrous tissue forming loose cysts filled with cancerous matter. (Fig. 8, *d*). The small glands, too, connected with the submaxillary, were cavernous and showed under the microscope the same elements.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Extra Meeting, April 13th 1852.

DISCUSSION ON ANÆSTHESIA.

Continued.

(Reported for the Medical Examiner.)

Dr. Parrish requested that Dr. Patterson would give to the Society the result of his observation on the use of anæsthetics in Europe, he having lately returned from a visit to that country.

Dr. H. S. Patterson said that he should have much preferred to hear a continuation of the discussion of the previous meeting by the gentlemen who so ably participated in it. He was unfortunately not present at that meeting, but he had read the report of its proceedings with much interest and instruction. But, being thus publicly challenged by Dr. Parrish to speak on the subject, he felt it his duty to contribute his mite to the discussion. He had until recently felt, as the great body of the profession in Philadelphia feel, in regard to the anæsthetics. His position had been that of doubt, of distrust, and avoidance of them as a dangerous innovation. These agents came to us in a very questionable shape originally. When the first report of anæsthesia in surgery reached us from Boston, it came, not only startling us by its novelty and the magnitude of the change in practice it contemplated, but also shocking us by its violation of our ethical notions and the savor of empiricism that hung about it. The new agent had a new, high-sounding and unscientific name, and there were rumors of a patent-right to be secured to its dis-

coverers. But when it was shown to be plain sulphuric ether, which any chemist could manufacture and any practitioner administer—when the name of Letheon disappeared, and the letters-patent were no longer heard of—especially when indisputable evidence of its power and utility reached us, we should have given the subject a more favorable reception and examination than we have done. But the mass of resistance to the use of anæsthetics has been more obstinate and impregnable here than any where else in Christendom; and our hospital—alone among great hospitals—has never permitted their employment even in the most painful operations. Participating in these feelings, and never having administered either chloroform or ether in his practice, Dr. P. visited Europe during the past summer, and one of the objects he proposed to himself was to obtain, if possible, more light upon this much mooted question.

In Edinburgh he had the opportunity of seeing and hearing a great deal of the use of chloroform, and it was in regard to the experience of that city that he desired mainly to speak. The undeniable and most important fact is, that in Edinburgh, where chloroform has been used with a degree of freedom, and with a frequency and extent elsewhere unknown, not a single unpleasant circumstance has attended its administration. Every obstetrician, surgeon and dentist in that capital uses it, without exception. Every teacher of obstetrics advises its employment, and gives it to his patients in labor, some in all cases and others only in cases of unusual duration and severity. No surgeon thinks of performing a serious or painful operation, one likely to be attended with great suffering or severe shock, without bringing his patient under its influence. Thousands of patients have inhaled it to full anæsthesia; the chemists manufacture and sell it daily in large quantities; and no one has been injured or even made ill by it. There does not remain a practitioner in Edinburgh opposed to its use. An infinite amount of pain has been relieved, great suffering has been prevented, the dread of operation has been in a great measure removed, and no harm has been done to a single individual. There is no denying these facts. There can be no supposition of concealment or unfair dealing. The character of the gentlemen in whose hands its employment is, of itself precludes the idea as one not to be

entertained for a moment. In a large proportion of the cases, if not in all, concealment would be impossible were it attempted. Dr. Simpson introduced the chloroform to our notice as a therapeutic agent, and he bears the unqualified testimony that he has never seen it do any mischief whatever to his patients. Dr. S. is a man whose word, in a matter of medical experience, must be taken without qualification. He has not only the candor of an honest man, but also the discriminating judgment which is not readily deceived, and the calm deliberateness which is not easily led away by the enthusiasm of a hobby. By his kindness Dr. P. was enabled to witness the administration of chloroform to several patients, and to converse with others who had used it in child-birth, some for a considerable length of time. In some cases Dr. P. has maintained its effects for several hours. This powerful agent was always administered with due caution, but with a fearless hand. The patient was thrown into a condition of perfect insensibility, and underwent operations otherwise painful, without any apparent sensation, and certainly with no subsequent recollection of suffering. The manner of Dr. S. indicates the most entire confidence in both the safety and utility of his practice. The lying-in women whom Dr. S. saw were all in excellent health and spirits, and Dr. P. thought that their average "getting up" was shorter and better after chloroform than without it. All asserted that they awoke from the slumber without the slighest after-sensation or recollection of pain, without head-ache or vertigo or nausea, and precisely as after a refreshing sleep. One spirited and intelligent lady, with whom Dr. P. had the honor to converse, roundly asserted that the ladies of Edinburgh *would* have chloroform whether their doctors gave it to them or not; that she would not approach her confinement without it, and that the knowledge that this invaluable boon was within her reach, had taken away all the trembling apprehension which had previously made her pregnancy a period of dread and suffering.

In other parts of Great Britain and on the continent, the anæsthetics are not used so freely as in Edinburgh, but still they are resorted to in all severe surgical operations, and very frequently in obstetric practice. There are very few who use them in every case of midwifery to which they are called, but there are still fewer who do not use them in some cases. No sur-

geon of any note refuses their employment altogether. They are used in every hospital of London and Paris, more or less. Dr. P. was amused by the ardor of a gentlemen connected with St. Bartholomew's, who, in a conversation on the subject, enthusiastically declared that all the other benefits conferred on mankind by the discovery of America, (bark and our democratic liberty included,) were eclipsed by the inestimable addition of anæsthetics to the treasury of the healing art.

The substance used exclusively in Edinburgh, and most generally elsewhere, is chloroform. The accounts we have of unpleasant or fatal effects from it, do not deter them from administering it. Dr. P. saw no sulphuric ether given, and met with no physician who employed it. The objections to its use are its highly stimulating qualities, (increasing the risk of fever and hemorrhage,) its unpleasant and exceedingly persistent odor, and its liability to leave a disturbed condition of stomach with gastric uneasiness and acid eructations. The question of danger from chloroform he would not discuss at present, except to express his conviction that it is ascribable, in all cases, to some error in the method of administration or in the management of the patient or of the inhaling apparatus. Dr. Simpson gives it on a napkin or handkerchief, lightly folded in a funnel shape and held near the mouth. In obstetrical cases he gives it on the approach of each pain, removing the napkin the moment the relaxation of the patient's muscles shows that the pain is passing off, and not reapplying it until her uneasy motions indicate the approach of another pain and that it is beginning to be felt.

In view of all these circumstances, Dr. P. enquired whether there is not reason to believe that we in Philadelphia have been a little unreasonable in our opposition to these agents. Certain it is, that they alleviate much suffering for which we have hitherto had no remedy, and that they have in a measure taken away the curse of child-birth, and deprived surgical operations of much of their horror.

Dr. Condie was inclined to believe, that a very considerable change, in the opinion of European practitioners as to the employment of anæsthetics, had recently taken place. That a much

greater degree of caution in their administration was now inculcated, and that the circumstances under which a resort to them solely to prevent pain, is proper, are admitted to be much more restricted than was the case upon their first introduction. This he inferred, from the very different tone assumed, of late, by the medical journals of Europe when treating of anæsthetics and of the cases in which their administration is justifiable. Much of the wild enthusiasm by which the propriety of a resort to them, in almost every case attended with pain or suffering, was insisted upon by their early advocates, has disappeared. It is now admitted, on all hands, that the leading anæsthetic (chloroform) is an active poison, and that to prevent disastrous consequences following its administration, the utmost caution must be observed; that we are not always able to determine the effects that may be produced, in different individuals, by the inhalation of the same quantity of the article; that the induction of anæsthesia is not justifiable in trifling operations, or in ordinary cases of perfectly natural labor; that, even in those cases in which anæsthesia is considered proper during parturition, it is unnecessary to push it to the extent of inducing an entire abolition of consciousness; and finally, that there are a number of circumstances the presence of which forbids absolutely, in all cases, a resort to it.

Anæsthetics have been in use for too short a period to enable us to arrive at any very certain conclusions in regard to their real value as therapeutic agents—to determine accurately all the cases and circumstances to which they are adapted, or to lay down the proper rules for their safe administration. It unfortunately happens that, whenever any important remedy is announced, instead of a dispassionate examination of its properties, and a cautious testing of its curative powers, it is at once seized upon by a set of enthusiasts, who laud it far beyond its deserts, and ascribe to it remedial virtues under circumstances where it is afterwards ascertained to be powerless for good, if its effects be not even positively injurious; and if the agent be one of great activity, it is only after the infliction of much injury from its injudicious employment, that it attains its proper place upon the lists of the materia medica. When iodine was introduced as a remedy—to believe those who first described its properties

and therapeutic powers—it was to remove, at once, consumption from the list of incurable diseases, and to arrest all scrofulous affections, with as much certainty as the bark or quinine is known to arrest the paroxysms of intermittent fever.

But, in reference to no remedial agent, has this wild enthusiasm been displayed to as great an extent perhaps, as it has in regard to anæsthetics. By their agency pain was to be expunged from the catalogue of human evils—child-bearing was to be divested of its agony, and the knife of the surgeon was to remove the diseased member from the body without the patient suffering a single pang, and this without the slightest danger or inconvenience either immediate or remote.

No wonder need be experienced that anæsthesia should have secured from the very first so many ardent advocates, that it should have been recklessly resorted to in almost every operation, in every case of labor, and in almost every disease attended with pain or acute suffering of any kind. Nor has, as yet, the occurrence of death after death, directly attributable to the influence of the agents employed in its production, been a sufficient warning to deter all from a resort to these, merely for the prevention or relief of pain.

By the physician, pain is to be studied with very different feeling from those prompted by a morbid sensibility. Its removal may not, under all circumstances, be advisable. Though invariably an evil, still, cases may certainly occur, in which it would be better to allow the patient to endure, for a short period, even severe suffering, than to induce in him a state of complete insensibility. It was the opinion of Dr. Physick, that, generally speaking, important operations are more successful in those patients who give full vent to their feelings, than in those, who, by a powerful effort of the will, suppress all indications of suffering. And there is some foundation for the enquiry whether, even admitting that, by the employment of anæsthetics, surgical operations may be divested of pain without any immediate danger to the life of the patient, the ultimate result of such operations is as favorable, upon the whole, as of those in which anæsthesia has not been induced.

A comparison that has lately been made by an acute and accurate observer, in our midst—based on the statistics of several

large hospitals—of the results of operations in the same institution, before and after the introduction of anæsthetics, as well as the results of operations performed in those hospitals where anæsthetics are now invariably employed, with that of the same class of operations performed in the Pennsylvania Hospital, without the induction of anæsthesia, would lead us to suspect that the abolition of pain by anæsthetic agents does actually exert an unfavorable influence upon the result of operations; an opinion at which Dr. Porter of the U. S. army had arrived from his experience of the use of these agents, during the war with Mexico.

In obstetrics, Dr. Ramsbotham, in the last edition of his *Obstetric Medicine and Surgery*, has denounced the employment of anæsthetics, excepting in some few exceptional cases; while Dr. Chowne, in a late discussion before the London Medical Society, remarked, that he had seen most disastrous consequences follow the administration of chloroform—not only simple after-consequences, but serious mental disorders. The fact of the occurrence of insanity from the use of chloroform is insisted upon by Dr. Webster, who has adduced several cases in which such a result occurred; his statements are of a character that forbid our treating them with entire indifference.

But even if we could, with positive and invariable safety, prevent the pains of parturition by the employment of anæsthetics —would it always be proper to do so? There may be some practitioners of such consummate skill in the application of obstetrical instruments, who, directed solely by their knowledge of the anatomy of the pelvis, and the position of the head, can apply them, without any risk of injury to the organs of the female, as well while she is in a state of entire unconsciousness as when she is in a condition to advise him, promptly, of any pain he may inflict upon her. Dr. Condie, however, very freely confessed that he preferred always, in the application of instruments during labor, that the susceptibility of the female to painful impressions should be unimpaired, as an additional safeguard to prevent her suffering injury from maladroitness on his part.

Much surprise has been expressed by Dr. Parrish, that the comparatively few cases in which fatal effects have resulted from the employment of anæsthetics should be used as an argument

against a resort to them in surgical operations and during labor, when the same objection will equally lie against the administration of any of the more potent and useful articles of the materia medica. But is it not far more surprising that the gentleman should not see the very material difference between the employment of a dangerous remedy to *save life*, and a resort to a similar remedy *merely to destroy pain*, in a case that we have every reason to believe, so far as the safety of the patient is concerned, will do very well without it? It will not do to point to the 9000 operations safely performed at St. Bartholomew's Hospital under the influence of anæsthetics, in evidence of the propriety of resorting to it, as a mere preventive of pain—for the one single case of death acknowledged to have occurred in that institution from the use of anæsthesia, independently of others of which we have been informed, is sufficient to counterbalance all the good supposed to have resulted from it, by the mere abolition of pain, in the 9000 cases. The life of one patient in 10,000 ought not to be sacrificed to obtain for the remaining 9999, relief from what is, in fact, in most cases, a very short period of suffering.

Dr. C. remarked, that he did not wish to be considered as altogether opposed to the employment of anæsthetics as therapeutic agents. He was satisfied that their introduction had armed us with a most potent and valuable means of relief in a numerous class of cases. From their internal use, by inhalation, as well as from their application externally, he has derived the most beneficial results in many instances: he has seen them arrest, immediately, the most violent paroxysms of puerperal convulsions, allay promptly the intense suffering induced by cramp of the stomach and intestines, and that attendant upon neuralgic affections of the internal organs, and of various portions of the surface. He could even conceive of operations in which the risk of danger from their employment, should not deter us from availing ourselves of their pain-abolishing effects. An operation may be necessary to save life, but one, at the same time, attended with so much and so long continued suffering, as to cause the patient to hesitate between its endurance and the *certainty of death* should it be omitted or delayed. In such a case, Dr. C. would not hesitate to recommend the induction of anæsthesia—believing that the risk the patient will incur from it will be fully compensated by its enabling him to undergo an operation, the pain of which it

would, otherwise, be scarcely worth enduring to purchase the few additional years of existence it may possibly bestow. Cases too occur, not necessarily fatal, of violent paroxysms of pain, occurring periodically, at shorter or longer intervals, and during a very long period of time, where relief from suffering, by which life is rendered a burden, is cheaply purchased by any remedy, even one, the exhibition of which may be attended with considerable danger. Such cases are, unquestionably, proper ones for the employment of anæsthetics; under many other circumstances also, they will no doubt be found useful and judicious remedies—even although no other good effect should attend their exhibition than the relief of pain.

Dr. Parrish remarked that he was surprised to find the statistics of Hospitals introduced here as opposed to anæsthesia in large surgical operations. The basis of the calculation, as I understand it, is a comparison between the results of amputations in the hospitals of New York and Boston, since the introduction of anæsthetic agents into these institutions, and those of the Pennsylvania Hospital, where they are not used. Dr. Condie, who generally speaks with such accuracy, on questions when facts are concerned, has not brought forward the figures by which he claims to sustain his position, but has made a general statement that a comparison between these institutions is altogether unfavorable to the use of anæsthetics.

Now, will any one undertake to say that a slight difference in the percentage of mortality, after operations of any given class, running through a period of only a few years, and without taking into account all the attending circumstances, the comparison being made between three institutions, and those not of the largest class, is to be taken as evidence against the use of an article, which has been employed thousands of times in the largest hospital establishments in the world?

Why, it is well known that the statistics of a hospital bearing upon any given point, may vary very much from year to year, and that a series of unfortunate results in one or two years will influence very materially the general results for a series of years. Thus an epidemic erysipelas may prevail, and carry off a large number of patients who have been subjected to capital operations;

and if the institution should be visited with such an epidemic for several seasons in succession, the mortality may become so heavy, as to keep it in the rear of the more favored institutions for a long series of years. There are, too, various other circumstances which may influence the mortality, entirely independent of the use of anæsthetics, and which in my judgment would render it very unsafe to draw conclusions, based upon the experience of two or three institutions during a period of a few years. I apprehend, also, that a difference will be found in the percentage of mortality after any given capital operation, during a series of years, amongst the best hospitals of this and of other countries, both before and since the introduction of anæsthetic agents, showing that other causes are constantly varying the results.

But if a difference in the mortality of hospitals prior to, and since the introduction of anæsthetic agents, is to be taken as an argument for or against them, we have a much more extended field of comparison than that offered by the three chief hospitals of this country.

The large hospitals of Europe furnish much more reliable data; and it so happens that the advocates of anæsthesia point triumphantly to the statistics of these institutions as affording ample evidence of a diminished mortality after the great capital operations, since the introduction of these pain destroying agents.

In the elaborate work of Professor Simpson, on anæsthesia in Surgery and Midwifery, the reader will find two chapters devoted to the question, whether anæsthesia increases or decreases the mortality attendant on surgical operations. The author has here collected the statistics of mortality after the large amputations, in different countries, as derived from official sources, including Phillips' tables, which comprise not only the results in hospital practice, but in the private practice of physicians in Great Britain and in other countries, so far as recorded in the periodical literature of these countries. He has also availed himself of Malgaigne's tables of results from the Parisian hospitals, forming altogether one of the most complete and extensive collections of cases yet published. The percentage of mortality after large amputations, calculated from these data, which were formed prior to the introduction of anæsthetic agents, are then compared with the results after the same operations with anæsthetics, as derived from the

British and Parisian hospitals, forming a series of upwards of 300 cases, up to the time when Professor Simpson wrote.

The conclusion arrived at is, that the mortality since the introduction of anæsthesia is sensibly diminished, and the argument in favor of anæsthetics thus derived is considered by Dr. Simpson as most cogent and convincing. I can only refer the members to this array of figures on the Ether side of the question, and ask them to compare them with those now brought forward on the other side, and see which is the stronger.

I believe myself that there is some degree of uncertainty in this method of calculation, but if it is relied on, Etherization has evidently the advantage.

In regard to the recent unfortunate death from chloroform at St. Bartholomew's hospital—it is certainly against it—though it is only one death in over nine thousand cases, in which the article has been administered there; still, this with the others which have been reported, shows that chloroform is a most potent agent, and that it should not be given on trivial occasions, and without great caution, while at the same time one death in ten thousand should not cause us to abandon it. I myself have always preferred the ether, believing it to be safe and reliable, and should not use the more powerful agent, where this answered the purpose.

Dr. Hays, stated that he was not disposed to discuss, on the present occcasion, the question of the propriety of using anæsthetic agents; but the statements made this evening by the gentleman who opened the debate, relative to the general and indiscriminate use of chloroform in Edinburgh, without a single instance of injurious effects resulting therefrom, were calculated, he conceived, to convey the very erroneous impression that no risk attended the employment of that potent agent. He felt impelled, therefore, by a sense of duty, to put in a word of caution. Nearly thirty cases in which death has been produced by the administration of chloroform have been recorded with their full details; and perhaps double that number have been casually referred to in debates before different learned bodies, but the particulars of which have never been published. Not a few cases also of death after the administration of chloroform

have occurred, in which, he believed, the result was chargeable to that agent, though ascribed to other causes. Be this, however, as it may, he thought that undoubted cases enough might be brought forward to demonstrate that the employment of chloroform was not devoid of danger.

Some of the recorded cases of death from chloroform have been ascribed to the article employed being impure; others to carelessness in its administration; and others again to some constitutional peculiarity or organic disease which should have forbid its employment; and thus it has been attempted to prove that in all these cases the fatal result might have been obviated by proper caution.

A case of death from chloroform, however, has very recently occurred which does not allow of any such loophole to escape, from the fact that danger always attends the use of chloroform. This case occurred—where of all places it should have occurred in order to teach a salutary lesson of caution—in St. Bartholomew's Hospital, London—where it had been boasted that chloroform had been used in between nine and ten thousand cases, in not one of which "has its employment left a stain on its character as an innocuous agent of good."

The subject of this case, was a young man only 23 years of age, affected with aneurism by anastomosis implicating the ear and a portion of the scalp behind it, and which had commenced when the patient was four years of age. He was admitted into St. Bartholomew's Hospital, and Mr. Lloyd determined to attempt its cure by ligating the vessels supplying it. Chloroform was given to the patient, and he was kept under its influence for half an hour, the operation having proved a tedious one. He recovered from its influence without any ill effects. The tumor was not, however, entirely obliterated. A little over a month subsequent to this operation, Mr. Lloyd found on examination an artery between the angle of the jaw and mastoid process which pulsated strongly, and on compressing it so as to arrest the circulation in it, the pulsation in the tumor entirely ceased. Mr. Lloyd determined to apply a ligature to it. Chloroform was again administered by the careful and experienced assistants of the Hospital, and the article used was from the same bottle which had been administered in the previous opera-

tion. In from five to ten minutes he came under the influence of the article, and Mr. Lloyd commenced the operation. Scarcely had he incised the skin when his assistant informed him, that the patient's pulse was sinking, and before any restoratives could be applied, he ceased to breathe. Every means that could be devised were resorted to in order to re-animate him, but without success. On post mortem examination, no morbid organic change in any organ was found to explain the fatal occurrence; but the blood appeared to have been poisoned. "It was fluid, and it remained without coagulation after its escape from the heart and vessels. It had also a brownish purple hue, much like that which is commonly observed in the spleen; none of it, when thinly spread out, presented the ordinary dark, black or crimson hue of venous blood." But for this untoward administration of chloroform, the patient might have lived to the usual term of human existence. Here, then, is a case in which no human foresight could have provided against the fatal result. The chloroform used was pure, and had been employed before without any ill effects; there was no idiosyncrasy in the patient forbiding its employment, for he had previously been under its influence with apparent impunity; that there was no want of caution and skill in its administration, we have the assurance in the fact that it was given by the experienced assistants of the Hospital; and that there was no organic disease forbiding its employment, was demonstrated by the autopsy. If this case is not calculated to prove that danger attended the administration of chloroform, Dr. Hays said he would be at a loss to know what kind of evidence gentlemen required for that purpose.

In reply to an inquiry made by Dr. Parrish, whether he (Dr. Hays) considered the case he had alluded to forbiding the use of chloroform in every case, Dr. H. stated, that were he compelled to undergo a very painful and protracted operation, he would himself take an anæsthetic, preferring to run the risk rather than endure long and severe suffering, and he would allow his patient the same option, if, after fully explaining to him the state of the case, he should desire to do likewise. But to resort to chloroform for every trifling operation, and in all cases where

the slightest and but temporary pain was to be endured, he conceived not only to be injudicious, but actually criminal.

P. S. Since these remarks were made two more cases of death from chloroform have occurred, one in Boston, the other in New Haven.

Dr. H. S. Patterson remarked that the meeting had got pretty well into the discussion of the question on its merits, when Dr. Hays brought down the St. Bartholomew's case upon us as a sudden extinguisher, and it appears that we cannot get beyond it. Around that all the discussion seemed now to centre, and it must be got rid of before any further progress could be made. He did not know that he could get rid of it, but at all events, it could be looked fairly in the face, and its real importance determined. The idea that arose in his mind while Dr. H. was speaking, was that this, like other cases of alleged death from chloroform, came with an air of mystery about it. A mischief has been done, somehow or another; life had been extinguished in some way; but the only fact now apparent is that the chloroform has done it. Let this be admitted, and it does not necessarily follow that the agent in question cannot be used at all therapeutically. The conclusion is greater than the premises will bear. The superstructure is much too large for the foundation. The fact seems to be that chloroform may be—indeed has been—inhaled in such manner as to produce death. Every article of the materia medica of any value, is toxical or at least injurious in some method of exhibition or some dose. Generally, the toxical is in the direct ratio of the therapeutic power. The potency which is curative in its judicious employment, may be deadly otherwise applied. The mere fact that a medicinal agent is capable of destroying life is no argument against its use. Is there any substance of acknowledged power in our pharmacopœia that may not do mischief? Are there not many that have been fatal to human life, not only when used criminally, but also injudiciously employed, although with the best intentions? He (Dr. P.) is not one of those who would willingly uncover the nakedness of the profession or expose its shame, but he would ask whether chloroform has destroyed more

human lives than opium, even in its medical use? He would only refer to the old treatment of *delirium tremens* by heroic doses of that drug. He had seen patients die in that disease, in the Pennsylvania Hospital and in the Alms-House, and who would say whether the condition which preceded death was coma or fatal narcotism? He had his own convictions on the subject, and they were such as to lead him to seek a mode of treatment for that affection without opium. But, admitting all this, does it prove that opium should not be used? On the contrary, opium remains an indispensable portion of our means of cure in innumerable cases. If a substance is poisonous, it is so in certain doses, in a particular mode of exhibition, and according to fixed and ascertainable laws. We can determine by observation what functions it affects, in what quantities and in what way. We do not hesitate to use poisons much more deadly than chloroform is alleged to be by its most vehement opponents, because we know their action and can regulate it to good therapeutic ends. If a patient should die of a dose of hydrocyanic acid or strychnine medicinally given, there would be no hesitation in concluding that there had been a gross error in the dose or in the manner of exhibition. Why refuse the application of the same rule to chloroform? It may be asserted that its poisonous influence is so subtle and so fatal that it cannot be regulated. But this is disproved by thousands upon thousands of cases of its successful administration. If it is poisonous at all, it is so only in a certain quantity or by a certain rapidity of introduction, which can be clearly ascertained, scientifically regulated, and securely guarded against. Let us now look, with a more thorough scrutiny into the St. Bartholomew's case, which has been thrown in our way as an impediment not to be got over. The first fact to be noticed is that this same patient, not a month previous, was kept under the full influence of chloroform for twelve minutes, during a painful operation, and without the slightest inconvenience or interruption to his recovery. There was plainly no "idiosyncrasy" here. It is proved that chloroform could be administered to that very patient with safety and with the most beneficial results. On the last and fatal occasion, he inhaled the vapor of chloroform for a much shorter time, and died before the first incision was completed by the knife

of the surgeon. Now, can any man believe that the chloroform was administered in precisely the same way, in the same quantity, and to the same extent, as on the former occasion? Like causes produce like effects. The man who takes a grain of opium to-day with beneficial effects, will not be fatally poisoned by a grain of opium a month hence. The probability is that in the first instance the chloroform was properly administered with a due admixture of atmospheric air, while in the latter it was hastily presented, of full intensity and undiluted. The quantity to be estimated is not altogether that poured upon the napkin or introduced into the inhaling apparatus, but that actually received into the lungs of the patient, and absorbed from their mucous membrane. A better case for the illustration of the principle just laid down could not be desired. The blame rests with the erroneous mode of the use, and not with the substance used. As for the mere allegation of toxical power, Dr. P. would give very little for a medicine that could not produce such effects in any case. He suspected the efficacy of every agent whose powers were so feeble as not to render it noxious in its inappropriate or immoderate employment.

As to the remarks made by Dr. Condie in reference to the enthusiasm of the advocates of new measures, Dr. P. thought that such a charge in reference to anæsthetics was singularly out of place in Philadelphia. The error here seemed to be all on the other side. He did not wish to complain of the conservatism of the profession here generally. Their cautious skepticism in regard to medical novelties had its great and lasting benefits. But these anæsthetics are no longer a novelty. Their precise value has not been definitely determined, nor have we settled all the laws that should regulate their use; but that they have great and important uses can no longer be doubted. It appears certain that they will become a fixed portion of the armament of the surgeon and the obstetrician. Why should we in Philadelphia alone occupy this position of dogged resistance and refuse to receive them? Dr. Condie has warned us against the enthusiasm of novelty. Dr. P. acknowledged the truth and value of his remarks. There are *quidnuncs* in the profession as well as out of it, and they will run wild after

new hobbies. But he would remind Dr. C. that this is not the only dangerous enthusiasm. There is another that, in its relation to other matters, has been recognized and pretty well comprehended in our country, where it has received the generic title of *old-hunkerism*. It consists in an obstinate conservatism, which brands every new thing as an innovation, in the bad sense of the term, without waiting to see whether it may not turn out an improvement. It rests content with old things, it wants no progress, and it resists all new things as essentially evil or mistaken. He was afraid that there was a leaven of the enthusiasm of *hunkerism* in this resolute opposition to the anæsthetics. At all events, the truth must soon make itself manifest, and the fact of the matter be established. There can be no doubt that anæsthesia will become, when better understood, a well regulated and well established portion of our practice, and the most the Philadelphia profession can claim will be the merit of having been the drag on the wheel that prevented a too rapid attainment of the goal.

Dr. Bell, in reply to a question from the President, (Dr. Jackson,) said that Dr. Mussey, his former colleague in the *Ohio Medical College, and the Commercial Hospital of Cincinnati*, uniformly made use of a mixture of ether and chloroform for the subjects on whom he operated; and without, it is believed, in any case, sinister results.

Dr. Atlee said: There is one point in the case mentioned by Dr. Hays that, perhaps, may have been overlooked. If we take up any book on Surgery, and refer to the subject of operations on the neck, we will find that instantaneous death occasionally results during the operation, and that this is attributed to the entrance of air into the veins of the neck. The question, then, would naturally arise, Could such an occurrence have taken place in this unfortunate case, and death have resulted from this cause and not from chloroform? Always in dread of such an event, I have never administered anæsthetics in important operations on the neck, lest death accruing under such circumstances, might be erroneously attributed to chloroform, and thus impair the character of a very valuable agent.

Dr. Page remarked that, notwithstanding the current of the argument, the opinion of all present on the subject of the use of anæsthetics seems, "like a handle of a jug, all on one side." All of the gentlemen, including those who spoke on the negative side of the question, admit that under certain circumstances these agents may and even ought to be administered, while under other circumstance they should be repudiated as likely to be productive of injury. What then are the circumstances requiring their employment? and the answer is, who can tell? The opponents of their indiscriminate use employ them under very opposite conditions. We are told by some that they should not be applied in cerebral excitements, in disease of the heart, and in pulmonary affections, &c.; but Dr. Condie has used the anæsthetic in convulsions with marked benefit; and in asthma and difficulty of breathing, ether has been highly extolled; and it is very far from probable that, some of the many thousands who have been placed in a state of anæsthesia for surgical operations, the extraction of teeth, &c., and who have done well, should not have been at the time laboring under severe cardiac affection. Now, for my part, I consider that the chief use of the agent, and the principal cause requiring its administration, is for the relief of pain; but to its indiscriminate use I am as much opposed as any member of the profession. I regret that so few of the members here speak from the book or card. They give us the experience and observations of others and not of themselves, and we know that there are few subjects on which there has been so much written and to so little purpose, as on anæsthetics, within the last few years, except perhaps cholera. With me, after a principle is once adopted, it matters not where it comes from, nor does it require a great accumulation of evidence for its elucidation; and I look upon it as a fixed fact that the anæsthetic may be administered whenever severe and prolonged pain would be otherwise suffered, unless strong indications exist to the contrary. None of us would recommend a patient to be placed under the influence of sulphuric or chloric ether or chloroform for a trivial surgical operation, or for the extraction of a tooth, nor would we use them on ourselves, because the pain is soon over, and it is not worth while to run any risk; and in this sentiment I heartily concur, as risk there is; as we know that unfavorable results have followed

their administration; and strange as it may seem, many of the fatal cases have occurred after the performance of what are commonly called slight operations. If I recollect aright two fatal cases occurred in quick succession in New York; one when the operation was for fistula in ano, and the other for hemorrhoids, both very simple and every day operations in surgery; and we were thrown into the utmost consternation that human life should have been thus endangered, and could scarcely believe that the result was due to any other cause than the chloroform. But, sir, some of the most simple operations occasionally terminate fatally, without any discernible cause. I once saw a patient lose her life from the passage of a thread through a small vascular tumor in the bend of the arm; and I also saw M. Velpeau remove a small tumor from the shoulder of a woman, and she died in a few hours without any assignable cause. Now, sir, patients will die after operations, and sometimes suddenly, and the surgeon cannot with all his ingenuity account for the death, unless it be ascribed to the luckless anæsthetic.

But it is for the relief of pain during the performance of the more important operations only, as has been before remarked, that it should be administered, and here it not only relieves great suffering, but may have done away with past anxiety, and may remove or diminish future danger. The dread of pain is one of the most depressing and distressing influences to which the suffering patient, or one who is about to submit to a severe operation, is liable. Now if this can be removed, much is gained. The patient who has once made up his mind to the necessity of an operation, does not fear its ultimate results or consequences. If it is one which, of itself, compromises life, the mind becomes settled as to its necessity, and the great fear is of the pain which must be endured during its performance, and the great objection made is that it will *hurt*. Now all of this feeling yields to the confidence which the anæsthetic inspires, and the common question which the patient puts and has always put to the surgeon is, "can you not give me something to relieve the pain?" We all know how intimate the relations are between the mind and body; and if we keep in view the old adage *sana mens in sano corpore*, the whole matter will be fully understood. The mind and nervous system being placed at ease under the belief that no pain

will be experienced during an operation, no matter how severe, will diminish much the dangers of what all surgeons have too well known as the nervous shock, or that condition in which patients die from the immediate effect of operations. It was formerly a common thing to hear of persons dying on the table during an operation; but who has known this to occur in Philadelphia when ether has been administered, and we are all aware that it has been given extensively and almost indiscriminately?

Another argument against its use is that the plasticity of the blood is altered, and that the healing process will not take place so readily as when the agent has not been employed. Facts seem to prove the contrary. I have never seen the cure more tardy after the use of ether than without it, and indeed in some instances which have fallen under my observation, recovery has taken place with remarkable rapidity. I assisted Dr. Goddard in an amputation of the thigh after a gunshot wound of the knee-joint, when the injury was tremendous, and when all the circumstances were so unfavorable as to induce me to oppose the administration of ether, not because I thought that it would do harm, but because I thought that the patient would most likely die, and that the fatality of the case would be ascribed to the agent. It was however given under the advice of Drs. Jewell, McClellan, and Wilson of Bustleton, and the only unpleasant consequence was a slight vomiting and faintness. The wound healed, and the old gentlemen is now well, and an approver of ether from experience. I have performed capital operations when the patients have been under its influence, and I have not been satisfied that it has ever proved injurious. I amputated a man's arm, and on the fourteenth day he was well enough to elope from the almshouse. I have removed thighs, legs, the penis and the testicle, with the patients in an unconscious state, and they have all done well. I operated for strangulated inguinal hernia on a patient of Dr. Naudain, to whom chloroform had been previously given freely during the trial of the taxis, both by Dr. N. and myself; and at my visit on the thirteenth day, I received a message that the man had waited all the day before for me, and that he had gone out to walk. These cases and others in my own practice, besides a vast many which have fallen under my observation in the hands of others, make me believe that the agent may be often used

without injury, if not with advantage. I lost a patient eighteen months since, after the operation for hernia, when chloroform was employed, but I could not ascribe the death to the agent. I have lost others both before and since, when no anæsthetic was given.

It has been said that the color of the blood is changed, and that black blood flows from a wound after the use of anæsthetics, This I have not observed. After amputations when the arteries have been secured, which is immediately done, the tourniquet is partially loosened, and then it is that the black blood flows, but it comes from the veins and not from the arteries, and the observer, who is perhaps anxious to view it in this light, mistakes the one for the other; but when the constriction above is entirely removed, all bleeding usually ceases.

In medicine anæsthetics have been extensively employed, and even by those who repudiate them in surgery, without disadvantage, and many have been rash enough to use them freely in obstetrics.

In midwifery I have used ether with the view of promoting relaxation of the os uteri, vagina, and the neighboring parts, and to induce a free secretion from *the parts*, which is the harbinger of the coming good time to the patient and accoucheur, and so far I have had abundant cause to be satisfied with its use. It promotes secretion and induces relaxation, while it does not interfere with uterine contraction or the bearing down effort. This is, I know, contrary to theory, but I believe it to be the fact. It seems, as has been well established, to act especially on and to control the voluntary muscles. Now the patient should not be placed in a state of full insensibility, but should be so far affected as not to suffer pain; and while thus influenced the sympathetic or synergic action of the abdominal muscles and diaphragm will be readily called into play by that of the uterus, which acts involuntarily. We may, indeed, say that a patient suffering no pain will readily yield to this sympathetic action, and will bear down forcibly, when without a freedom from suffering, she would be almost unable to follow the assiduous directions of her accoucheur to assist herself. A remarkable case of this kind fell under my care a short time since, in the person of a young lady in her first confinement, who had been suffering

active pain from 7 A. M., to 4½ P. M., without making further progress than the dilatation of the os uteri to the size of a quarter dollar. She suffered much and cried loudly for something to relieve her. She inhaled ether; the dilatation took place speedily, *the parts* became relaxed and moist, she bore down *like a woman*, and before 6 o'clock the child was dressed and the mother bandaged up. She expressed herself as comfortable, and so she continued. I have never yet witnessed the occurrence of any unpleasant accident from the administration of ether during labor, and I have seen much suffering avoided.

We are told that it should not be given when instruments are to be applied, and for the reason that the practitioner should be advised by the patient when he is giving her pain and when he is doing injury. This is to a certain extent true, but obstetrics should teach the practitioner how to apply his instruments, and how to avoid mischief without depending entirely on the assistance given by the woman's silence or moans. Who ever yet pulled on the forceps without giving pain, and who has desisted because his patient cried out? Other indications do and should guide him; he should know when and how to operate, and should not trust entirely to his patient for the success of his practice. Nervous irritability may be mitigated in obstetrics as well as in surgery, by the timely and proper use of different remedies, and if we resort to ether instead of opium and its preparations, and other narcotics, it is because it is more efficacious and not more injurious. Every surgeon and every accoucheur will sometimes give the different narcotics. As before remarked, the full anæsthetic effect should not be induced; enough of the agent should be given only to relieve the pain, as it may have to be used for a considerable time.

One strong expression is that ether is intoxicating, but this must depend on the meaning of the term intoxication. If the soothing effect of opium, hyoscyamus, lactucarium, &c., or perchance their exciting or poisonous effects, or the phenomena attending convulsions, coma, concussion, &c., can be called intoxication, then the anæsthetic is intoxicating. We know that the effect of ether is transient and soon passes off, so that after its administration sensibility soon returns; but how soon would a young lady be able to leave a dentist's chair and go into the

street after an inebriation from brandy or wine. The effects of drink do not pass off thus suddenly, and etherization is not intoxication.

I do not wish to advocate the use of anæsthetics under all circumstances, nor their indiscriminate application. One circumstance contra-indicating their employment, although other things may call for them, is when it is absolutely necessary to keep a patient perfectly still, as during the operations for hernia, cataract, and others of equal delicacy, when a slight involuntary movement might cause a cut to be made where it should not be made. It should not be used in operations in the mouth, because the patient might not be able to get rid of the blood, and might suffer from its passing downwards. Other contra-indications must constantly arise in particular cases, which should be duly considered by the practitioner. Of this I am convinced, that it is not very easy to kill a person with ether, else death would have occurred in very many instances, for no agent has been so widely and indiscriminately used, and yet with so few bad consequences. Ether should be preferred to chloroform. It does not act so suddenly nor so powerfully, and experience teaches that it is the safer agent. A mixture of the two is used, but I think it objectionable, as ether is the more volatile, and if its effect is not speedily induced it will soon evaporate and leave the chloroform behind to have its full effect. The better plan would be to give ether alone, and then, should the patient be insusceptible to its action or become excited, a few drops of chloroform may be administered. Under all circumstances, a full supply of air should be allowed, and the more simple the apparatus employed, the better.

Experiments proving that life may be preserved in warm-blooded animals after the destruction of a considerable part of the spinal marrow. By E. Brown-Séquard, M. D., of Paris.

It was believed by all Physiologists, until within the last three years, that the destruction of even a small portion of the spinal marrow was a cause of rapid death. Some experiments, the results of which I communicated to the Society of Biology, at Paris, on the 2d of December, 1848, induced me to believe that death, after destruction of a part of the spinal marrow, is more in consequence of hemorrhage than of any thing else. Since that time I have discovered that pigeons and many other birds are able to live and even to grow, after the destruction of nearly half of the length of the cord. (See the *Comptes Rendus et Mémoires de la Soc. de Biologie*, tom. 2, p. 28 and p. 49.) But I had never seen life continue more than ten days in mammals, after the destruction of the whole lumbar spinal cord.

Recently, in New York, from experiments performed upon a young cat, I have discovered that life may persist more than seventeen days after the destruction of that part of the spinal cord which extends from the eleventh or twelfth costal vertebra to the sacrum. The animal is still living. Although paraplegic, it appears to be in good health. Since the operation was performed, it has evidently grown much. In this case the animal was operated upon after having been rendered insensible by chloroform, a measure which I found useful in preventing a great loss of blood, and the general nervous disturbance consequent upon such an operation.

Although unique till now, this fact proves that the continuance of life is possible in one species of mammals, after the destruction of a considerable part of the spinal cord.

From what I have seen in this last experiment, as well as in the large number of experiments I have performed during the last three or four years, I think I am authorized in concluding that the well known opinions of Legallois, Wilson Philip, Krimer, Chossat and others, in relation to the influence of the spinal marrow upon the heart, the stomach and lungs, upon the urinary secretion, and upon animal heat, are quite erroneous.

CLINICAL REPORTS.

Clinic of the Jefferson Medical College. Service of PROFESSOR DUNGLISON.

(Reported by J. AITKEN MEIGS, M. D.)

January 24th, 1852.

The attention of the class was directed to the consideration of a highly important set of affections.

Cardiac disease is at all times the subject of painful interest to the persons affected, and not unfrequently the cause of considerable perplexity to the practitioner. Indeed, the least disturbance of the normal action of the heart is very often amply sufficient to fill the mind of the patient with intense alarm and anxiety. He at once supposes that he is the victim of a confirmed and incurable organic disease; whereas, when properly investigated, the symptoms are most frequently found to be evidences of some temporary excitement of the central organ of the circulation, produced by an unusual excitation or depression of the system generally. Of the great number of persons presenting themselves for medical examination and advice at the clinic of this institution, and complaining of some derangement of the heart's action, either as to frequency, force, or rhythm, comparatively few offer the evidences of a confirmed and well-marked structural disease of that organ. The majority of such cases are mainly dependent upon faulty innervation; being traceable to functional aberration on the part of some particular organ or set of organs, or to a plethoric, anæmic or depraved condition of the circulatory fluid.

Nevertheless, organic affections of the heart, since they have become the objects of careful research, and elaborate study, are found to be much more common than was formerly supposed; and you will recollect, that during the present clinical course, we have, in your presence, examined and prescribed for several cases, illustrative of various morbid conditions of the muscular tissue, and certain structural alterations of the valvular apparatus of the heart.

You see, then, the importance of a thorough study of these diseases, the necessity of mastering them in all their details, and obtaining some clear and definite conceptions as to the differential diagnosis between purely functional and essentially structural diseases of the heart; since mistakes in this respect will often be productive of much needless, and occasionally serious alarm, in the minds of the parties interested. Moreover, the success of our therapeutical applications, and the favorable or unfavorable character of the prognosis, will depend intimately upon the correctness and exactitude of our diagnosis.

I propose here to introduce for our mutual study and instruction, the following interesting series of cases, elucidative of a few of the prominent features of both functional and organic diseases of the heart; and illustrating not only the variety of causes which may give rise to these morbid conditions, but also the difficulty of diagnosis, and the consequent difficulty of successful and rational treatment—too often, indeed, unsuccessful even when the characters of the diseased condition have been accurately appreciated.

Several of these cases are examples of cardiac palpitation, some of which are purely functional in character, appearing to be unassociated with any other disease, while the others are more or less complicated. Of the complicated cases there is one of bronchitis and perhaps of tuberculous deposition; another, in some manner connected with the rheumatic diathesis; and a third, dependent upon torpor of the colon. Three of our patients are affected with organic disease of the heart. In one there is mitral insufficiency; in another, dilatation of the organ; in another, hypertrophy with auriculo-ventricular derangement; and, in a fourth, hypertrophy with disease of the semilunar valves.

Having detailed these cases *seriatim*, we shall consider the differential diagnosis between these two classes of heart affection.

Case I. Mary D——, æt. 25, of a pale complexion, light hair, middling stature, and unmarried, in here presenting herself for relief, complains, as you have heard, of intense pain in the præcordial region, radiating from the heart as a centre over the entire chest. She has been troubled with this pain, at varying intervals, for the last two years. No unusual motion of the heart was at first

experienced, but a year ago last Christmas she began to be aware of slight palpitation accompanying the pain, and paroxysmal in character. Latterly, the paroxysms of palpitation have increased so much in frequency and violence, that not only is her mind filled with great anxiety as to the result of her malady, but she suffers considerable physical distress, as you perceive, from the consequent dyspnœa.

The patient attributes her present ill health to the grief and trouble which she endured, in consequence of the loss of a sister to whom she was much attached.

The attack at first came on whenever she made any unusual exertion, or was more than ordinarily excited, depressed, or in any way agitated in mind. At the present time, the least exercise, as in the performance of her customary domestic avocations, is productive of a paroxysm of severe palpitation and its attendant dyspnœa. The oppression experienced at the præcordium during these attacks is occasionally so great, especially when she lies down, as to endanger suffocation.

She is also, at times, seized with vomiting or regurgitation without any preceding sickness or uncomfortable sensation; and is furthermore attacked, at irregular periods, with severe pain in the middle of the back. Her appetite is diminished; tongue pale, exanguious in appearance, and quivering when projected; bowels slightly constipated, more especially during the past few weeks; and this condition is, now and then, associated with acid or bitter eructations, and frequent discharges of flatulency.

Thus much for the general survey of the case. Let us seek further information from the aids furnished by the ear and the hand.

Percussion elicits no unusual or extended dulness, from which we legitimately infer that there is no enlargement of the heart; and, therefore, that the aberration in the action of the organ is not properly assignable to, or in any manner connected with, hypertrophy or augmentation of size in the organ eccentrically. Auscultation affords confirmation to the inference, that hypertrophy does not exist; for we find that the cardial pulsations, though evidently increased in frequency, are diminished in force, the systole of the heart being characterized by an irregular and fluttering effort; phenomena the reverse of those presented by thickness of the parietes of the organ. Furthermore, there is a

diminution of the sounds, and a general tremulous diffusion of the impulse, which is observed over a wider space, though certainly much weaker and less decided than in health.

It may be well to observe in this connection, that in the majority of cases of cardial palpitation, there is an increase instead of a diminution of the sounds, which are at times so loud as to be distinctly audible to the patient when in the horizontal attitude, and reclining on the left side. Again, accompanying the feeling of tumultuous commotion in the chest, there is often an ill-defined sensation of a roaring or rushing noise ascending towards the head, and following the course of the great vessels. This phenomenon is not observable in this case, and although we do not notice here the bellows murmur, which is said so frequently to accompany the first cardiac sound, with a little care it is possible to distinguish a faint humming sound, (*bruit de diable,*) over the great vessels of the neck. This, as you are aware, is considered to be indicative of an impoverished condition of the blood; and we see here further proof of general vascular atony, in the reluctance with which the cutaneous capillaries readmit the blood, which has been forced from them by pressure; the surface continuing, for some time, of a pale, dead white hue, instead of rapidly regaining its usual healthy tint.

The pulse, which ranges from 95 to 100 in the intervals, partakes of the same irregular and fluttering character as the impulse of the heart. During the paroxysms, it rises as high as 105 in the minute.

The paroxysms of dyspnœa continue in her case about half an hour, and recur whenever she becomes frightened or alarmed at any sudden noise, as the slamming of a door, &c., showing great irritability, and impressibility of the nervous system; and they are accompanied by constant distressing sighing, which—as I have elsewhere taught—is probably owing to the loss of balance between the amount of air inspired, and the quantity of blood thrown into the lungs, in this unusually impressible state of the cardiac centre; the result of which loss of healthy equilibrium is the insufficient aëration of the blood necessary to supply the wants of the economy; and the repeated and deep inspirations established to effect this indispensable aëration.

To obtain as clear and definite an idea as possible of the nature of the affection under which the patient is laboring, we shall endeavor to trace the cardiac disturbance to its proper origin.

Purely functional palpitation of the heart is referable to one or both of two great causes ;—defective or disturbed innervation, and derangement in the quantity or character of the circulatory fluid ; which derangement may consist in polyæmia, anæmia, or in a depraved condition of the blood ; in other words, a condition in which that fluid suffers some quantitative or qualitative change—some alteration in its sensible or chemical characters. Moreover, an obstinately deranged state of the heart, causing undue and persistent palpitation, may be the effect of previous disease. Thus, gouty and rheumatic affections often originate the morbid conditions in question ; and upon inquiry of this patient, we find, as you may have anticipated, that a few years ago she suffered from an attack of acute rheumatism.

The connection between rheumatism and cardiac disease is a matter of considerable interest, and one which has, within the present century, been much studied and investigated. You will have occasion to observe, among young persons especially, how frequently acute rheumatism is either accompanied or followed by some acute or chronic affection of the heart, and the more frequently a person is attacked with acute rheumatism the greater is the liability to organic cardiac disease.

In reviewing the history given by the patient of her malady, and the examination which we have made of the case in your presence, you will be ready to conclude that her cardiac affection is evidently functional—not organic in its character. The paroxysmal nature of the palpitation and the dyspnœa, the anæmic state, the dyspeptic phenomena which she presents, the neuralgic pain in the back, the general impressibility of the nervous system, &c., all tend to this conclusion. Our diagnosis, then, is that there is faulty innervation of the heart ; and indeed general erethism and impressibility of the whole nervous system.

The indications for treatment, under this view, are manifest. We must address our remedies to the nervous system, and endeavor to give tone and renewed vigor to the entire economy, by improving the composition of the circulating fluid, and inducing through it a new and healthy action in the tissues.

Now, the whole range of the materia medica furnishes us with nothing that will more readily effect this object than the chalybeate preparations. We might prescribe for her the Ferri pulvis of the last edition of the Pharmacopœia of the United States—*le fer réduit par l'hydrogène* of the French *pharmaciens*, which is a favorite with some physicians, but has no advantage over the Ferri subcarbonas, which I shall now order.

℞. Ferri Subcarbonat. ʒij.

Divide in chart. xii. quarum capiat unam ter in die.

The bowels are to be kept regular by an occasional dose of rhubarb and magnesia; the latter is selected as an antacid and laxative; and the former exerts, in addition to its cathartic property, a tonic influence on the alimentary tract. We shall likewise direct, that repeated and vigorous friction shall be made over the seat of pain in the back, by means of a coarse towel, or by the hand frequently dipped in wheaten flour to prevent abrasion of the surface; and shall request her to present herself at the clinic one week from this time.

Case II. Jas. McC——, æt. 41, a weaver by trade, suffers from palpitation of the heart, and severe cough, accompanied by profuse expectoration. He has for a long time been sensible of increasing ill-health, which from the detail of his symptoms is undoubtedly connected, either as cause or effect, with the cardiac derangement of which he particularly complains.

The present increase in the severity of his symptoms appears to be mainly attributable to a bronchial complication; for, in addition to his chronic malady, he is just now laboring under the effects of an attack of bronchitis; and we have purposely introduced the case to your consideration, as exemplifying not only several interesting facts connected with heart disease, but the increased difficulty encountered in arriving at a correct and satisfactory diagnosis in cases where the chronic ailment, oftentimes the original cause of the deterioration of health, is to a certain degree masked and obscured by some intercurrent affection.

Now, the most prominent of the symptoms presented by the patient, and most urgently demanding our attention and investigation, are the distressing and protracted dyspnœa—a symptom perceptible to you all, and the spitting of blood—hæmoptysis,

phenomena very alarming to the patient, and playing a significant part in the formation of our diagnosis.

The patient tells you that blood is mingled with his sputa—that he spits blood. It behoves us, then, to inquire what may be the cause of this, and what relation it bears to his present or past ill-health; and furthermore, whether or not this relation, if any such exist, be ominous of evil.

Inspection of the countenance and hands reveals, by the pallid hue of the skin, a slightly anæmic condition; and coupling this circumstance with the fact, that hemorrhages are very apt to occur in consequence of diminution in the quantity, or alteration in the quality, or consistency of the blood, we might be led to attribute to some such change in the circulating fluid the passive exhalation of blood from the pulmonary mucous membrane in this case. Pulmonary hemorrhage, however, is too frequently secondary, and ascribable in the great majority of such cases to organic disease, either of the heart or lungs. A common consequence of such organic disease is hyperæmia of the pulmonary vessels, the effect of a purely mechanical agency; and this condition is often the immediate precursor of those symptomatic or passive hemorrhages as they are called. It is the direct cause of the hæmoptysis, and is itself the effect of pulmonic or cardiac lesion. Thus, the pulmonary tissue may be filled with tubercles, which so impede and obstruct the pulmonary vessels, that mechanical hyperæmia is the result, followed by hemorrhage. So, too, disease of the heart may be productive of the same effect, by obstructing the free return of the blood from the lungs. In both cases the pulmonary capillaries become turgid, and transudation or exhalation of blood very readily takes place. In such cases, it rarely, perhaps never, happens, that the parietes of the vessels do not have their nutrition and cohesion so impaired as to render the escape of blood more easy.

On ausculting the patient, we find, that the inspiratory murmur is not continuous, as in health, but is interrupted, as by jerks or starts. This is very appropriately called the "interrupted or jerking respiration,"—*respiration saccadée* of the French writers, and is generally regarded as an unfavorable symptom, indicating as it often does, incipient tuberculous deposition. It ought usually to be looked upon as such; but as it would seem to be an

accompaniment of pleurisy, pleurodynia, and spasmodic asthma, in their incipiency, you will readily see, that its diagnostic value depends much upon the concomitant phenomena.

The patient complains of continued and distressing dyspnœa, the cause of which requires investigation; as difficulty of breathing is a phenomenon met with under a variety of circumstances, and may be caused by many different morbid conditions.

Physiologically regarded, dyspnœa is experienced whenever the normal relation between the amount of air inspired, and the quantity of blood circulating through the lungs, is in any manner disturbed. An effort,—oftentimes an exceedingly severe and distressing one,—is required to preserve this equilibrium. Whatever, therefore, prevents the proper aëration of the blood is a cause of dyspnœa. A little further reflection will show you, that diseases of the heart and lungs must be frequently attended with this uncomfortable symptom, in consequence of the obstacle which, in a greater or less degree, they offer to this indispensable process.

Undue activity of the circulation, faulty innervation of the respiratory muscles, pleurisy, emphysema, hepatization and tuberculization of the lungs, or any condition causing obliteration of the air cells, or excluding the air from any portion of the lungs, as in pneumonia, pulmonary hemorrhage, &c., where the bronchi and air vesicles sometimes become choked with blood and mucus; disease of the cardiac valves impeding the passage of blood into or obstructing its egress from the lungs, effusion into the pericardium, &c., for the reasons stated, are all more or less accompanied with dyspnœa.

Though the original difficulty of breathing was probably connected with the cardiac disturbance, the present increased dyspnœa, we are inclined to think, is mainly traceable to a pulmonary cause. Percussion aids us here; for we find, on examination, a very slight, but sufficiently perceptible, dulness under the left clavicle. This is unfavorable, inasmuch as when taken in connection with the jerking character of the respiration, the hæmoptysis, the dyspnœa, &c., it augurs incipient tuberculosis.

The rest of the chest is clear.

Auscultation reveals great obscurity in the sounds of the heart; it is indeed almost impossible to discriminate them; and

this, in part, is owing to the mucous rhonchi, which may be heard even before the ear reaches the chest of the patient; and by listening attentively, they are found to be intermixed with sonorous and sibilant rhonchi. The air enters the lungs freely and readily on the right side: on the left, less so; and we have the slight cooing and violoncello varieties of the sonorous rhonchi.

Of all the affections with which heart-disease is associated, pulmonary complications are the most frequent, and generally require the most energetic treatment. Bronchitis, pneumonia, and pleurisy are often co-existent diseases; sometimes superadded by the action of extraneous causes; and very often, it must be admitted, as effects of the cardiac derangement. So blended and intermingled, as in the present case, are the symptoms, at times, that it is extremely difficult and occasionally impossible to determine the exact nature of the two morbid conditions, and their relations to each other, or to ascertain to which is due the priority of occurrence.

Pulmonary hyperæmia resulting from cardiac disease may terminate, as is often the case, by the exhalation of blood from the mucous lining of the air passages; or it may run on so as to produce an inflammatory condition of the bronchial lining, or of the pulmonary tissue, and thus complicate the primary cardiac disease.

In consideration of the tuberculous tendency evinced by this patient, we shall put him on the use of the oleum morrhuæ, in the dose of a tablespoonful three times a day; and in addition thereto, with a view to its mixed eutrophic and tonic effects, direct him to take at the same time, ten drops of the liquor ferri iodidi, morning, noon and night, in a wineglassful of simple syrup.

In chronic diseases of the heart but little benefit may be expected from counter-irritation; but in a case like this, where pulmonic complication exists, a resort to some revellent agent, is indicated. We shall direct him to rub upon his breast, night and morning, the oleum tiglii, mixed with an equal portion of the oleum olivæ, until the peculiar eruption is produced; when the application must be discontinued, until the eruption has passed away. It may then be resumed. He will thus have all the benefit which interrupted counter-irritation is capable of effecting. As his cough is troublesome, and by its severity tends to keep up the hæ-

moptyis, he may take in the course of the day, in divided doses, a teaspoonful of the liquor morphiæ sulphatis, added to the ordinary domestic cough mixture—H a u s m i t t e l—of equal parts of vinegar, butter and molasses stewed together, which we are in the habit of prescribing in this clinic.

(To be concluded in next Number.)

BIBLIOGRAPHICAL NOTICES.

A Treatise on the Diseases of the Chest; being a Course of Lectures delivered at the New York Hospital. By JOHN A. SWETT, M.D., Physician to the New York Hospital; Member of the New York Pathological Society. New York, D. Appleton & Co., 1852. 8vo. pp. 585.

This work, as we are informed by the author, was originally published in the New York Lancet some ten years since. At "the repeated solicitation of his medical friends," he has revised these lectures, and has added those new facts which an enlarged experience, both in private practice and in the New York hospitals, has given to him. The form of lectures is, however, retained, and therefore the work to a certain extent loses in value as a regular treatise upon the diseases of the chest; for we do not think that the form of phraseology which may be admirably adapted to a lecture is nearly so well fitted for a thorough description of the phenomena and modes of treatment of disease. This objection is, however, of very little moment; we are disposed to allow to authors the greatest possible latitude in selecting the mode of treating the subject, which may suit their own fancy; and whether they choose to divide their work into chapters or cut it up into lectures, matters but little.

After the first two introductory lectures in connection with the physical exploration of the chest and with the rational symptoms of its diseases, the author proceeds at once into his subject, and takes up the history of bronchitis. In one of these preliminary lectures, he speaks of pain, dyspnœa, cough and expec-

toration as the four rational symptoms of diseased lung. Pain, Dr. Swett thinks, with great justice, is much more marked in pleurisy than in any other disease of the chest. We agree with him that it is almost the only disease in which the pain is violent, but not that the pain is more severe in slight cases than in those of more gravity. Pain of course becomes slight when there is a large effusion into the chest; but in almost all cases of very severe pleurisy, whether complicated with pneumonia or not, the pain is always great as long as there is little effusion into the chest; afterwards it is much lessened.

After passing through the subject of bronchitis, the author proceeds to enter upon the history of pneumonia. He remarks that chronic bronchitis, (in which we agree with him,) is not generally much under the influence of medicine. Still it is all-important to decide that a case of chronic cough depends upon bronchitis, and not upon any more dangerous disease of the lungs with which it may be readily confounded.

The description of the physical alterations of pneumonia might, we think, be much more full and more exact than they appear in Dr. Swett's work. Thus he speaks of abscesses following pneumonia as rare. They are, it is true, very rare after death, but we have good reason to believe that pneumonia may now and then end in abscess; although when this result takes place, the disease will almost always terminate favorably. Abscesses in the lung, our author states, are favored by two circumstances—one is the effusion of pus into the cavity of the pleura. "When this has occurred, it will sometimes happen that a distinct abscess will form in the lung, which may finally open into a bronchus, or communicate with the pleura." We have certainly never witnessed a case of the kind, and we may conclude that it must be at least very rare. The metastatic abscess is scarcely to be classed as one of the terminations of inflammation; it is simply a cause of it, not an effect; with this view we may infer that Dr. Swett also agrees.

Gangrene of the lungs, Dr. Swett states, is usually classed as an effect of inflammation. We were scarcely aware of that. For many years gangrene has been regarded as very rarely connected with pneumonia; sometimes, however, it is in part dependant upon it, and may follow an inflammation of the

lungs, just as it may upon one of any other part of the body. In many cases of the disease, gangrene of the lungs begins at once without being preceded by any obvious inflammatory action in the part.

In speaking of the treatment of pneumonia, the author has given us the statistics of M. Grisolle on the effects of treatment. These results coincide very nearly with what is generally believed. Bloodletting is the most important remedy, diminishing the duration of mild cases, and lessening the mortality in those of a severe class; but after bleeding, the author considers the most powerful remedy to be antimony. Eight to ten grains of it he considers as the medium dose during the twenty-four hours. Now, from our own experience, after having used antimony very faithfully and carefully for many years, we are led to a very different conclusion. It is a powerful remedy, perhaps the most powerful; but, at the same time, when used in the large doses recommended, is by no means a safe one; we have seen extensive ulcerations of the bowels produced by its use, even in cases in which no diarrhœa followed it, so that on the whole we would administer antimony very rarely in large doses as a contra-stimulant. Mercury is certainly about as good a remedy in treating pneumonia as antimony, and is free from many inconveniences which belong to the use of the latter medicine—we mean when employed as a contra-stimulant; but there is no objection to the use of antimony as a sedative expectorant when given in small doses.

Pleurisy our author also treats with some detail, and of course he enters into the pathological changes and mode of treatment. Then after passing through emphysema of the lungs and some other affections, he passes to the subject of tubercles in the lungs. The pathological changes in the lungs are of course described at length, although less carefully than they might be; but the tuberculous diseases of other organs, which form so large and important a part of the history of these diseases, are almost passed over. It seems to us that in writing the history of pulmonary phthisis, it is all-important to keep in view the fact that the deposition of tubercles and the changes produced by them constitute the anatomical characters of the disease. It is true these bodies are commonly more hurtful in the lungs than

in other organs, but the lungs are far from being their exclusive seat of origin; hence it is most important to keep in view the fact that consumption is a general tuberculous disease specially determined towards the lungs.

The history of the causes of tubercles in the lungs is treated of in much detail. The usual circumstances that favor the development of tubercles are stated, as well as some of the means of resisting their attack. Amongst the antagonising causes which check the development of phthisis, the author mentions one, of the truth of which we have long been abundantly convinced—that is, that the intemperate use of ardent spirits to a certain extent diminishes the chances of an attack of consumption. Of the two modes of death—by drunkenness or consumption—we trust that no one would have a moment's hesitation in preferring the latter to the former. Still the question arises, whether a physician may, without serious mischief to the patient, order the habitual use of wines or spirits in cases in which, from the history of the family of the individual, as well as the actual circumstances of the case, an invasion of pulmonary consumption seems to be imminent. As a rule, we would object to any medical opinion which might give to a patient the idea that alcohol is the best preservative against consumption, but in cases in which confidence may be reposed in the self-control of the individual, we believe that very often the physician is amply justified in recommending the use of moderate quantities of alcoholic drinks. Still, every caution must be used in giving advice of the kind, or the remedy may prove much worse than the disease. When consumption is once developed, however, the free use of alcoholic drinks is almost always injurious, often greatly increasing the fever. Under these circumstances they should be given only in small quantities as a prescription for the disease. But there are cases in which, from the emaciated aspect of the patient, and from a hereditary tendency to consumption, the onset of this disease is with reason feared, in which the moderate, careful use of stimulating drinks may with propriety be advised by physicians, who believe that their duty is to save life, and who would administer stimulating drinks on the same principle that they would give cod-liver oil or any other strictly medicinal remedy.

A number of remedies are afterwards considered by the author,

in the treatment of phthisis. Cod-liver oil he is disposed to distrust, and thinks it is soon to be forgotten. With this opinion we are far from coinciding. We believe that some oily substances have long been recognized as very useful in the treatment of phthisis, and that cod-liver oil answers the indications which demonstrate the utility of these oleaginous remedies better than any other material of the kind. There is no doubt that many individuals laboring under decided tuberculous disease are vastly improved by a course of cod-liver oil; the disease is apparently arrested, or, as many physicians say, is cured. We must confess, however, that we have been stupid enough to see very little proof of positive actual cure; but after a time the disease again becomes more active, and will resume its march until the termination. Still the remedy, on the whole, is by far the best yet discovered against phthisis, and we cannot but think Dr. Swett has treated it much too cavalierly. His remarks as to the use of the other remedies commonly used in the treatment are generally judicious; as to opium he lays down some well-timed cautions.

Dr. Swett next devotes a chapter to cancer of the lungs. This disease in the United States is certainly very rare, and then it occurs almost always in connection with some external cancerous disorder.

On the whole, although the work of our author, as far as regards the diseases of the air passages, is by no means free from faults of arrangement and some errors of more importance, it is in the main sound and based upon data which are received as facts in the best European schools. These are corroborated by his own experience, which, from the position he has enjoyed at the New York hospital, has been very extensive. We are but little disposed to criticise the arrangement of his subject, for that in part depends upon the radical defect we have already alluded to—that is, the arrangement of the work in lectures; but in part it may be ascribed to some errors as to the relative importance of particular subjects.

After having passed through the diseases of the lungs, the author then proceeds to the diseases of the heart. This part of the work is much more carefully executed than that devoted to the lungs. We do not know if it is a part which was origin-

ally published in the New York Lancet or not; if it is, it has certainly been attentively revised. After passing through a careful statement of the sounds of the heart in health, the author proceeds to an enumeration of the signs and symptoms of a diseased heart. This part of the subject is well treated of, and is quite thoroughly detailed. The different facts attested by Bizot, Hope, and Pennock are mentioned in connection with the portions of the text that belong to them. Passing to individual diseases of the heart, the author commences with pericarditis. After going through the history of this disease, he next proceeds to its causes. Amongst these he classes inflammatory rheumatism as the most powerful. We must confess that we are not a little disposed to doubt this. Pericarditis certainly does often occur conjoined with rheumatism, but less frequently than endocarditis; and we are induced to think that it occurs at least as often with pneumonia or pleurisy as with rheumatism. We agree with the statements given by some of the authors to whom Dr. Swett refers as to the comparative rarity of pericarditis in rheumatism.

Endocarditis is rather singularly mixed up in the arrangement of our author with pericarditis—that is, he enters upon the treatment of pericarditis after commencing the subject of endocarditis. The author remarks very truly that "the great cause of endocarditis is acute articular rheumatism;" and he then proceeds to say, that "the remarks that I made in relation to this cause, when speaking of pericarditis, apply precisely to endocarditis." We should say they do, with the very important proviso that endocarditis is rarely absent in a case of acute articular rheumatism, while pericarditis is present with almost equal rarity; that is, the one occurs as the rule, and the other the exception. It is indeed difficult to say why pericarditis should be more frequently present than pleurisy in this disease, the pericardium and pleura bearing always an exceedingly close relation together in their morbid relations; while the same close connections certainly do not exist between the lining membrane of the heart and the pericardium.

The author then states that "the rational and the constitutional symptoms of endocarditis resemble so nearly those of pericarditis." This is to a certain extent true, and increases somewhat the difficulty of diagnosis. Although we regard de-

cided pain as rather indicative of pericarditis, still in some cases of endocarditis there is pain, but it is usually slight and not constant, although it is indicative of obstruction to the circulation. No one, therefore, without the aid of other signs can rely upon the general symptoms, although these are tolerably good guides for the diagnosis. The most certain guide, as our author states, is the blowing sound. This is similar in some respects to that developed in anemia, although a certain degree of experience would point out the distinction between these sounds, which although nearly similar, are not precisely identical; the bellows sound resulting from anemia forming a peculiar musical tone very different from that of endocarditis. It is, however, much more easy to point out these differences in living patients, than to render them perceptible from a simple description. The author goes on to state that many cases of endocarditis are not marked by severe symptoms, and would be entirely latent if it were not for the bellows sound. In this we agree with him, but we may state that it is always the bellows sound appropriate to endocarditis, which has not the musical tone of that belonging to anemia.

The author afterwards passes on to another cause of confusion which he fancies to exist between two of the sounds of pericarditis and endocarditis. As to this cause of confusion we are obliged to give his own words:

"I cannot help alluding still further to the characters of the two characteristic morbid sounds heard in cases of acute pericarditis and of endocarditis—the friction sound and the blowing sound: for I am well aware, that no subject connected with the science of auscultation, has puzzled its followers more than this. For a long time no accurate distinction was made in the character of these sounds—they were constantly confounded with each other. After a time, however, the true distinction between a blowing sound and a friction sound was established. The ear became accustomed to discriminate them by the fundamental character of each—the kind of sound. Other circumstances, already alluded to, were noticed in connection with each. The superficial, diffused and moveable nature of the friction sound, as well as its comparatively short duration, and its being usually double, were carefully noted. While the blowing sound, by its greater concentration and fixedness, its tendency to pass along the course of the great vessels, or to exist at the apex, by its being usually single and continuing for a long period, became impressed with marks which, although not perfectly characteristic, are yet often of great value in doubtful cases. If you could readily distinguish a blowing sound from a friction sound in all cases, that would be enough for the diagnosis. But you cannot. A

friction sound may hardly be distinguished from a soft blowing sound, and both may become equally harsh and grating."

Now it certainly seems to us that the author has imagined that those sounds are very similar, or at any rate not unlike. This is undoubtedly an error. The friction sound is evidently external to the heart, and synchronous with the movement of the whole organ against the walls of the chest. The bellows sound is very different, and strictly coincident, generally with the systole, sometimes with the diastole of the heart.

Bloodletting and mercury are of course mentioned as the most efficient agents in checking inflammation of the serous membrane of the heart. They are such, undoubtedly, but they are not always required or even always admissible; if the patient be taken with these inflammations when he is already much exhausted, then general bleeding is of course entirely out of the question. Yet these very cases sometimes get well with almost as much rapidity as those in which the proper treatment has been called for during the course of the disease.

Dr. Swett next proceeds to the subject of the enlargement of the heart. His remarks on this subject are in general just and appropriate, especially when he alludes to the irregularity of the pulse. He remarks with great correctness that this is far from being a sign of disease; in many cases it is certainly unconnected with any organic affection.

Valvular diseases of the heart of course are of no little importance. We regret that the limits of this notice will prevent us from examining the diagnostic characters given by our author. He next passes through other affections of the heart of less gravity, and finally terminates the course of lectures with aneurism of the aorta.

We may, in concluding our remarks, state, that although we have found the work in several respects imperfect, and occasionally very different from what we have considered as strictly accurate in the details, yet on the whole it shows that the author is well acquainted with his subject, and in most respects it is an accurate and well digested compend of the state of our knowledge upon the diseases of the chest. A little more condensation of certain portions of it would, however, have left room for the author to have written more at large upon some points over which he has passed very lightly.

THE MEDICAL EXAMINER.

PHILADELPHIA, MAY, 1852.

PENNSYLVANIA MEDICAL COLLEGE.

We learn, with much pleasure, that the Faculty of this Institution is about to be strengthened by the accession of Drs. F. G. SMITH, J. M. ALLEN, and J. J. REESE, who have accepted the Professorships of *Institutes of Medicine*, *Anatomy*, and *Medical Chemistry and Pharmacy*. The two last named chairs have been lately vacated by death and resignation; the chair of Institutes is a new creation. These appointments are in every respect excellent, and cannot fail to advance the interests of the school in question. Drs. Smith and Allen have for many years filled lectureships in the Philadelphia Association for Medical Instruction, on the branches to which they are now translated in the Pennsylvania College; and the reputation which they have established, as eloquent, erudite, and judicious teachers, is second to none in the country. Dr. Reese has been for some time connected with the Philadelphia Medical Institute as a lecturer on Materia Medica and Therapeutics, and has been most favorably distinguished, both as a teacher and as a writer on this and other branches of medicine. His success in the chair of Materia Medica is a guarantee of his ability to do full justice to the kindred subject which he now undertakes.

We may also say, in noticing these appointments, that the high personal character and professional standing of the gentlemen named, cannot but give strength and popularity to any school with which they are connected. The Pennsylvania Medical College has already attained a most respectable position, and under this new organization, may rapidly anticipate a brilliant career. We are sure that it will have the cordial good wishes of the entire profession in Philadelphia. B.

We have the pleasure of laying before our readers, in the present No., a communication from Dr. *E. Brown-Sequard*, of Paris, now on a visit to this city, of which his father was a native.

This gentleman has attained a distinguished place amongst the experimental physiologists of the day, as one entitled to the utmost confidence in his observations and statements. He holds the high position of perpetual Secretary to the "Societé de Biologie" in Paris, and his communications have been extensively copied into all the standard treatises on Physiology, as well as into the foreign and domestic journals. We believe that it is his intention to give instruction in this department of Medical Science, which we are sure, from our knowledge of him, will prove both interesting and useful.

MEDICAL NEWS.

DEATH OF PROFESSOR GRANT.—At a meeting of the medical Faculty of Pennsylvania College, held March 29th, 1852, the following preamble and resolutions were unanimously adopted:

Whereas, It has pleased the Supreme Disposer of events to remove from our midst, our beloved friend and colleague, Dr. WILLIAM R. GRANT, Professor of Anatomy in this school since 1843: therefore

Resolved, That this Faculty is deeply sensible of the loss it has sustained in the decease of one so long endeared to its members, by his purity of heart, his amiability of character, his uniform tenderness and courtesy, his professional zeal and ability, and his devotion to the duties of the chair of which he was the incumbent.

Resolved, That, in token of respect to the memory of Professor Grant, the Faculty will attend his funeral in a body; and that one of its members be appointed to prepare a biographical sketch of the deceased, to be delivered as an introductory lecture to the session of 1852–53.

D. GILBERT M. D., *Registrar.*

NAVAL SURGEONS.—The Board of Naval Surgeons, recently convened in this city for the examination of Assistant Surgeons, have reported the following duly qualified for promotion, viz: Washington Sherman, of the date of 1845, to take rank next after Passed Assistant Surgeon William A. Harris. Randolph F. Mason, of the date of 1846, take rank next after Passed Assistant Surgeon Henry O. Mayo; and John Rudenstein, of the date of 1846, to take rank next after Passed Assistant Surgeon Randolph F. Mason. The Assistant Surgeons of the date of 1847, who have passed, to take effect from the 26th of April 1852, will rank in the following order, viz.: Edward R. Squibb, Robert J. Farquharson, Philip Lansdale, James F. Harrison, James S. Gilliam, J. W. B. Greenhow.

RELATIVE MORTALITY OF THE STATES.—We have seen it stated that the proportion of deaths to the population in the several States of the Union, as shown by the census of 1850, is as follows: Vermont, 1 in 100; Iowa, 1 in 94; Georgia, 1 in 91; Michigan, 1 in 87; Tennessee, 1 in 86; North Carolina and Alabama, 1 in 85; South Carolina, 1 in 83; Maine, 1 in 77; New Jersey, 1 in 75; Virginia, 1 in 76; Illinois and Delaware, 1 in 73; Arkansas, 1 in 70; Texas, 1 in 69; Rhode Island, 1 in 56; Kentucky and Connecticut, 1 in 64; Maryland, 1 in 60; and Massachusetts 1 in 51.